



MissionCriticalPartners
Because the Mission Matters

911 Operations Consolidation Assessment and Recommendations

Final Report

PREPARED OCTOBER 2018
FOR WINNEBAGO COUNTY, ILLINOIS

MissionCriticalPartners.com

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Executive Summary

The Winnebago County (County) Emergency Telephone Systems Board (ETSB) contracted with Mission Critical Partners, LLC (MCP) to provide an assessment of its two-PSAP environment in relation to several consolidation options that it is considering. In summary, the current environment presents the following challenges:

- Previous studies performed in 2015 and again in 2016 did not provide sufficient data to be actionable. Particularly, these studies overlooked governance and financial considerations holistically when presenting options.
- The State of Illinois, through new legislation, is encouraging consolidation of PSAPs as the state migrates toward Next Generation 911 (NG911).
- Winnebago County is experiencing a financial crisis that is leading to staffing shortages within the County PSAP operated by the Winnebago County Sheriff's Office (WCSO).

This assessment, at the ETSB's request, was meant to supplement previous studies performed to identify areas of technology, operations/staffing, governance and financial factors that will impact future consolidation efforts.

The ETSB should be commended for implementing shared systems in the past, such as the current 911 telephone system, computer-aided dispatch (CAD) system and use of the statewide STARCOM 21 radio system for law enforcement communications. These systems already in place are configured to facilitate a consolidated environment. The ETSB is procuring a new CAD system and is part of a planned 911 call-handling system cooperative, i.e., the Northern Illinois Next Generation Alliance (NINGA) NG911 shared host/remote system.

All of these systems will support the various consolidation options that MCP examined with minimal reconfiguration. MCP did find that the current use of multiple remote dispatch points (RDPs) for fire/EMS and the lack of a common countywide radio system for fire and EMS will provide challenges that can be overcome but will introduce difficulties nonetheless.

MCP analyzed budget and financial information received from Winnebago County, the ETSB, the City of Rockford (City) and municipal RDPs to determine that the baseline cost of 911 service in Winnebago County is \$9,157,126.

MCP performed a staffing analysis of the baseline environment, as well as the proposed consolidation options. MCP's staffing analysis involved a multimodal approach based on various industry-accepted tools that consider workload, volume- and coverage-based staffing, and performance metrics. The staffing projections for all models, including the recommended one, indicate that both facilities are understaffed at the baseline; therefore, all but two of the models' personnel costs are higher in relation to the baseline.

This report outlines the technological, operational, personnel, governance and financial implications of several models as outlined in the RFP. In summary, MCP has concluded that:

- Consolidation to the City PSAP would provide a high quality of service. However, due to the higher labor rates, this option would cost more and would not provide the governance that stakeholders have indicated they desire. Municipalities and the County would have to weigh the increased costs associated with this option, although lower than other options, with the tradeoff of having governance in an advisory board only.
- Consolidation to the County PSAP could provide a high quality of service if the staffing situation is stabilized. This option would cost the least but also would not provide the governance that stakeholders have indicated that they desire. Municipalities and the City would have to weigh the cost benefits associated with this option. Although the sheriff could create a governing board, in reality it only would be advisory in nature because sheriff is still an independently elected position. Additionally, the City would have to consider the challenges that the disparity in pay between its collective bargaining agreements and the County's would present when faced with a consolidation.
- MCP has analyzed several two-PSAP models that were outlined in the RFP. They involve variations of law enforcement and fire/EMS dispatch services being separated amongst two PSAPs. MCP does not recommend further fracturing of the system, because doing so would not result in an appreciable enhancement of service but would result in increased costs.

MCP's recommendation is for the formation of a municipal PSAP, governed by a board developed by the stakeholders, to be located at the current County PSAP facility. MCP has provided an analysis and several options for cost-sharing models that are in place nationwide in similar consolidated centers for the governing board to select. The City would continue to operate its PSAP for Rockford public safety services. In the interim period, the municipal PSAP can be stood up as an RDP, with the City PSAP handling all of the call-taking.

The municipality-operated alternate PSAP can be stood up and further developed, incrementally, into a full PSAP serving all law enforcement and fire/EMS services outside of Rockford. The County still would have two PSAPs in operation—albeit one that has each municipality's law enforcement, fire/EMS services under one consolidated dispatch operation. For this reason, MCP recommends that the WCSO remain with the municipal PSAP.

If it desires, the City would have the option of consolidating to the municipal PSAP at a time that is feasible. This eventually would lead to a fully consolidated center in Winnebago County, with a governance board that consists of all involved stakeholders. The full consolidation option, if achieved, ultimately would represent a cost savings in relation to the baseline costs MCP developed. The City PSAP could remain in place as a backup facility.

The challenges that have presented themselves recently with the current structure, as well as challenges that lie ahead with future consolidation, will require a more active role from the ETSB. MCP recommends that the ETSB implement measures, as its budget permits, taking a more active role in the governance of

the entire public safety communications ecosystem in Winnebago County. These actions include the hiring of a countywide 911 director to oversee the future PSAP model and further developing and implementing plans toward a consolidated center. MCP also recommends that, incrementally, the support staff of the countywide 911 system—including geographic information system (GIS), Master Street Address Guide (MSAG) and technical systems support, as well as training and quality assurance—be placed under the 911 director by the ETSB.

1 Introduction

Winnebago County (County) is considering the transition of its public safety answering point (PSAP) operations to the City of Rockford (City) PSAP as a possible means of creating efficiencies that would streamline 911 call-taking and dispatching services while reducing the burden on the County budget. The initial studies performed by L.R. Kimball (LRK) indicated that such a transition would do little to improve cost effectiveness. Moreover, preliminary proposals by the City indicated that such a transition would result in significant increases in the fees charged to communities that currently rely on the County PSAP for 911 services.

After issuing a request for proposals (RFP), the County's Emergency Telephone Systems Board (ETSB) hired Mission Critical Partners (MCP) to evaluate the various options available for providing more efficient 911 services within Winnebago County.

The initial study, conducted in August 2015, recommended a single PSAP, while a June 2016 follow-up study further discussed three additional options. ETSB members were not comfortable that the studies considered the concerns of some stakeholders in the county. The previous studies also did not consider the true cost of 911 service, nor did they outline baseline costs (including municipal contributions).

The situation culminated in the fall of 2017 when the Winnebago County Sheriff's Office (WCSO) faced a budget crisis, which led to a threat of layoffs in the County PSAP. Although the layoff notices eventually were rescinded, this threat led to staff resignations, including key supervisory staff, at the County PSAP, which today is facing both the original fiscal crisis and a staffing shortage. Temporary measures were put into place to prevent a lapse in service—including a temporary intergovernmental agreement with the City to provide on-demand call-taking services—during the staffing shortage. The City also proposed an alternative, resource-based cost model to the municipalities served by the County PSAP. (Various funding models are discussed later in this report. The proposed costs allocation caused those municipalities to enter into an agreement of their own, forming a coalition to investigate the best method for them to obtain 911 dispatch services.

Following some introductory kickoff calls to introduce team members, MCP attended the May 8, 2018, Winnebago County ETSB meeting and remained onsite to collect data and interview stakeholders. Following the ETSB meeting, MCP held a kickoff meeting with the board members and the ETSB's designated project team. During this meeting, MCP discussed the proposed methodology for the data-collection effort that would ensue over the next few days of the visit.

MCP's data-collection approach had two primary objectives. The first was to focus on gathering information that was not addressed in the previous reports. Secondly, MCP intended to make a concerted effort to hear the opinions and concerns of every group of stakeholders.

Over the next day and a half, MCP heard many concerns by conducting onsite meetings and visiting all PSAPs within the county. MCP met with the following individuals or groups:

- ETSB members and leadership
- PSAP leadership at both the WSCO and the City
- Winnebago County board chairman
- City of Rockford mayor
- A consortium of municipal mayors representing the communities that receive law enforcement dispatch services from the County PSAP.

In addition to the interviews and information-gathering sessions, MCP personnel toured the County and City PSAPs, as well as the MEDCOM and ROCCOM remote dispatch points (RDPs). Information regarding the RDP operated by the Harlem-Roscoe Fire Protection District was provided via telephone and email interviews, per an agreement between MCP and the district's chief.

MCP heard different views and concerns from the ETSB members who would be participating in the development of this study. Some of these concerns are addressed later in this report. They include, in no particular order of importance, the following:

- Concerns that the previous studies performed in 2015 and 2016 did not provide sufficient guidance regarding an appropriate cost model for a consolidated system.
- Concerns that the cost model must be fair and equitable
- Concerns that all parties involved must be adequately represented by any governance agreement

2 Current Configuration

2.1 Technology in the Current Configuration

At the request of the ETSB, MCP studied equipment and capital expenses to determine whether those expenditures somehow will affect the costs or operational capabilities associated with the different governance models. This report is not intended to provide a comprehensive assessment of the technology in place at the current PSAPs and RDPs.

2.1.1 Facilities

The Winnebago County PSAP is operated by the WSCO and located in a standalone County-owned facility. Its current condition is consistent with the previous assessment performed in August 2015. MCP's visit to the facility confirmed that it is in good repair and has room for some expansion if necessary. A further facility study outside of the confines of this report is advised to determine the feasibility of using this facility in the various options outlined later in this report. The ETSB makes an annual bond payment to the County for the cost of constructing the WSCO facility.

The City PSAP is collocated in the Rockford Fire Department administration building. Its current condition is consistent with the previous assessment in August 2015. MCP's visit to the facility confirmed that it is in good repair and has room for some expansion if necessary. A further facility study outside of the confines

of this report is advised to determine the feasibility of using this facility in the various options outlined later in this report.

It should be noted that the 2005 IGA¹ for the Operation and Funding of the Winnebago County Emergency Telephone System states the following: “In the event such facilities cease to be used for emergency telephone system purposes, the fair market value of the County PSAP and the renovations to the City PSAP shall be returned by the County or City to the surcharge fund and the ETSB.” The annual bond payment for the County PSAP facility is due to be retired in 2019. This should be considered in any financial considerations by the ETSB going forward.

2.1.2 Call-Handling Equipment (CHE)

The current CHE used at both PSAPS’s is a Positron Lifeline 100 system that is scheduled to be replaced in 2018 or 2019. The County is part of the Northern Illinois Next Generation Alliance (NINGA) Next Generation 911 (NG911) host/remote system.

In pursuit of a more efficient and robust telephone system network that would connect 10 counties within the Northern Illinois region, Winnebago County joined NINGA. These counties formed this alliance not only for the connectivity capabilities but also the affordability, which stems from buying into a robust NG911 network as a region versus an individual agency. Other participants in the NINGA project include the counties of Boone, Bureau, Carroll, DeKalb, Jo Daviess, Lee, McHenry, Ogle, Stephenson, and Whiteside.

NG-911, Inc. serves as the integrator for the NINGA project and will oversee the installation of the NG911 network, which includes two data centers strategically placed within the NINGA regional footprint, as well as CHE needed at all PSAPS.

While NINGA has experienced delays at the plan-filing stage, all counties within the NINGA group are prepared to move on network and CHE installations. MCP concurs with the ETSB’s approach of pursuing a shared call-handling system—to enable information sharing and to achieve cost effectiveness, as well as the ease with which regional or consolidated solutions can be implemented.

2.1.3 Computer-Aided Dispatch (CAD)

The current CAD system in use by the County and City PSAPs is Motorola Solution’s PremierCAD and PremierMDC, formerly Printrak. A system upgrade contract recently was awarded to Trittech, Inc. for the CAD system, mobile data terminals (MDTs) and records management system (RMS). The CAD and MDT portion of the project is being funded by the ETSB and that funding has been budgeted and allocated.

Both the City and County plan to move forward with the RMS upgrade, but it is unknown at this time how many of the municipal departments will participate or what the cost to each agency will be. While the contract has not been finalized, the current cost for the CAD and MDT portion of the project is \$689,757,

¹ Intergovernmental agreement.

including hardware and first-year maintenance. This implementation includes up to 23 CAD positions. The estimated cost per position is \$100,000. As the contract is being finalized MCP recommends that the following be considered:

- The City is the fiduciary for the CAD/MDT/RMS project. The ETSB should consider how this would be impacted by any decision regarding possible consolidation.
- The ETSB should consider adding remote CAD workstations to the RDPs operated by the fire/emergency medical services (EMS) if they continue to provide service. This would help to provide the proper flow of information and incident response. While both ROCKCOM and MEDCOM have their own CAD systems installed, they are not using the same vendor as the ETSB for its CAD system implementation. As long as the RDPs continue to operate, it would reduce the amount of time County call-takers spend on the phone requesting EMS if the RDPs are on the same CAD system or are equipped with a CAD-to-CAD interface, at a minimum.

2.1.4 Logging Recorders

The City PSAP is utilizing two logging recorders. They have a 64-channel NICE Inform logging recorder that was installed in 2006. They also have a NICE IP recorder that is capable of recording 20 simultaneous calls that was installed during the Motorola MCC 7500 radio project and is used to record the STARCOM21 talkgroups. Inform Lite software has been installed that provides search and playback functionality for both recorders and has the ability to handle 120 resources (channels and simultaneous recordings). Both the Inform and IP recorders can be accessed via the Inform Lite software.

The County PSAP is utilizing a 72-channel NICE Inform logging recorder.

2.1.5 Radio and Alerting Systems

The police agencies within Winnebago County normally operate on the statewide STARCOM 21 800 MHz system, including the WCSO units, other local police departments and the Rockford police department using various talkgroups. Fire and EMS units are dispatched on various very-high frequency (VHF) frequencies. The County PSAP only can transmit on Winnebago County TAC 1, 2 and 3. They monitor the following channels: Illinois State Police Emergency Radio Network (ISPERN), Rockford City 1, 2 and 5, District 16, Beloit (Wisconsin), Cherry Valley police talkaround, and Illinois Radio Emergency Assistance Channel (IREACH). Other municipalities are dispatched on frequencies that in most cases are licensed by the fire protection districts themselves or the EMS agencies.

The County PSAP supervisor has access to the countywide community warning siren system that activates more than 50 sites in the event of life-threatening weather, evacuation threats or imminent attack. The system is activated from a console/personal computer (PC) located at the supervisor's workstation. Although this currently is a County function, if the County were to no longer maintain its own PSAP, arrangements would need to be made with the Winnebago County Emergency Services and Disaster Agency to address how the activation of the sirens would be handled.

For the purposes of this report, key findings are as follows:

- A common law enforcement radio system exists that easily could be replicated in various configurations. Currently, both PSAPs have the ability to access the STARCOM 21 system.
- No common fire/EMS radio system exists that easily could be replicated in various configurations. Additional communications capabilities would need to be established with the fire and EMS services for any direct communications or dispatch. The lack of a common fire/EMS communications system is a concern voiced by several of the fire departments. Currently there are at least 10 different frequencies in use for fire/EMS countywide.

2.2 Operations/Staffing

The current two-PSAP configuration has been in place since 2006 following the construction of the County PSAP facility.

2.2.1 Current Call-Handling and Receipt Configuration

A diagram was provided to MCP by the coalition of municipalities that are served by the County PSAP (see Figure 1 below). It accurately represents the current 911 call flow for Winnebago County. The caller's location determines the primary PSAP, which allows calls to be selectively routed to either the County or City PSAP. Normally the call is answered by the PSAP that is primary for law enforcement dispatch.

Because the County and City PSAPs share the same 911 CHE and CAD systems, automatic number identification (ANI) and automatic location identification (ALI) information can be transferred between the PSAPs if calls are misrouted. For example, if a call for emergency service located in Rockford is received by the County PSAP and the call-taker inputs the information into the shared CAD system, the call immediately is routed to the appropriate dispatcher's CAD workstation at the City PSAP. In addition, the PSAPs can act as each other's backup during peak call times or if one PSAP experiences a power outage or other equipment failure. The existing agreement between the ETSB, City and County ensures that three fully functional positions are available for County personnel at the City PSAP, and that five fully functional workstations are available at the County PSAP for City personnel, if either center needs to relocate.

2.2.2 Current Call-Processing and Dispatch Configuration

The County PSAP dispatches all law enforcement incidents, except for those within Rockford, which are handled by the City PSAP. Fire/EMS calls within Rockford are dispatched by the City PSAP along with fire/EMS calls for several fire departments with which the City maintains agreements for dispatch services. For all other County fire/EMS calls, the call-taker provides pre-arrival instructions and contacts the appropriate RDP based on the individual municipality. Currently there nine fire departments and five EMS services are dispatched by five RDPs.

The City PSAP also serves as the Mutual Aid Box Alarm System (MABAS) Division 8 dispatcher. The MABAS system is activated by the on-scene incident commander (IC) during incidents where resource needs are beyond the day-to-day capabilities of the local fire department. The IC will contact the

department-identified MABAS dispatch point requesting that they assume dispatch for the given incident per local MABAS protocols. The MABAS dispatch point assumes operational dispatch for the duration of the event, using a scripted card as a guide. The MABAS dispatch center may or may not be the dispatch center of origin, however is responsible for handling any multiple alarm or special incidents. For 2017 there were 46 incidents that required a dedicated MABAS dispatcher lasting from two to three hours on average depending on the incident.

While both the County and City PSAPs can transfer callers and enter calls for service in the shared CAD system, this is not the case with the RDPs. No direct CHE or CAD connection exists between the County and City PSAPs and the five RDPs for fire/EMS in the county. Call-takers must contact each PSAP directly using pre-programmed speed-dial numbers to request a fire/EMS response. While this practice is not uncommon across the United States, it is preferred that fire/EMS dispatch centers have direct communications with the caller, or at a minimum have access to ANI/ALI information. When the transfer results in a lack of some intelligence regarding the call—either ANI/ALI information, CAD premises information, or even just situational knowledge about the early phases of the call prior to transfer—it is possible that a transferred call does not receive the same level of care as one handled solely by the same PSAP.

In addition, no established standards exist for RDPs within Winnebago County. While the ETSB has some insight into their operations, call-response information is not tracked by the County PSAPs which leads to an inconsistent level of service across the county.

In early 2018, the City of Loves Park released a public safety² study of the police, fire and EMS response delivered to city residents. The study highlighted several areas of concern related to emergency response, including that there is no direct radio communication between the EMS agencies and the County PSAP. In addition, if the Loves Park’s designated primary EMS agency is unavailable, then the County PSAP must continue to utilize a phone list to contact the next available service. Finally, the study noted that EMS call-response information is not routinely reported to Loves Park and recommended regular reporting to the city. The findings in this study accurately describe the concern regarding “disconnected” RDPs, as MCP observed in Winnebago County.

² http://loves-park.il.us/images/filelibrary/file_1863_1-.pdf.

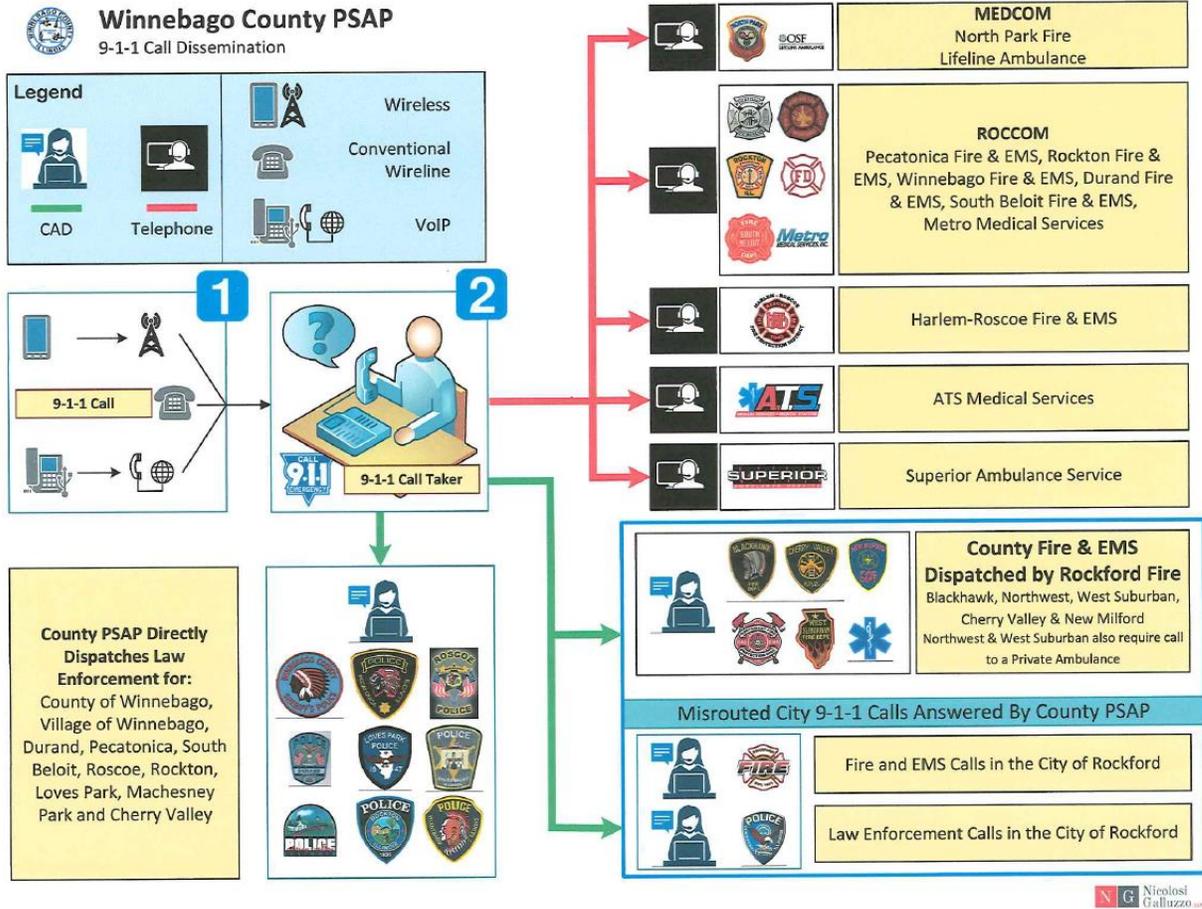


Figure 13: Call Dissemination in Winnebago County/Rockford PSAPs

2.2.3 Staffing Analysis of Current Configuration

The City PSAP operates as a combined primary PSAP, answering all incoming 911 calls and processing all emergency and non-emergency police, fire/rescue and EMS calls for service within Rockford using a split call-taker and dispatcher operations model. There are 16 call-taker/dispatch console positions in the City PSAP; ten are capable of call-taking and dispatch, while six are call-taker-only positions. The County PSAP utilizes three of the positions included in that count as backup, should it need to relocate.

The County PSAP operates as a primary PSAP, answering all incoming 911 calls and processing all emergency and non-emergency police calls for service. The County does not directly dispatch any fire or emergency medical services. There are 14 call-taker/dispatch console positions in the County PSAP; ten

³ Figure provided by Nicolosi Galluzzo, LLP.

are capable of call-taking and dispatch, while four are call-taker-only positions. The City PSAP utilizes five of the positions included in that count, should it need to relocate.

Minimum staffing for the City PSAP is eight positions: two fire dispatchers, three law enforcement dispatchers, and three call-takers. One supervisor is always on duty.

Minimum staffing for the County PSAP is four positions: three law enforcement dispatchers and one call-taker. One supervisor is normally on duty, but the 911 manager occasionally may act as a supervisor due to the current staffing shortage. In addition, the supervisor may act as a call-taker or monitor a TAC channel.

Both the City and County PSAPs operate in a horizontal configuration—meaning that the entire process of receipt, processing and entry of a call is done by call-takers, separate from the dispatcher. A vertical configuration is one where the same telecommunicator who answered the call processes and dispatches the call.

MCP concurs that the horizontal configuration is best suited for both PSAPs based on several factors:

- Call volumes
- Separate union contracts in the Rockford PSAP
- Current operational necessity to transfer EMS calls would make it difficult for a vertical dispatcher to maintain awareness of the caller and fire or police dispatch
- Current CAD and telephony equipment is optimized for the horizontal configuration
- Lack of a countywide fire and EMS alerting system would make vertical dispatching difficult due to the necessity of transferring to RDPs and EMS agencies

2.3 Governance of the Current Configuration

The Winnebago County ETSB was established in June 1988 under the auspices of the Local Government Emergency Telephone System Act, 50 ILCS 750/15.4. The ETSB consists of 11 voting members:

- The County sheriff
- The Rockford police chief
- The Rockford fire chief
- The police chief for the City of Loves Park
- The police chief for the City of South Beloit
- A representative of the Village of Machesney Park Emergency Services Department
- A chief from a rural fire protection district
- Four at-large residents of the county, at least one of whom shall be a currently active or retired firefighter and at least one of whom shall be a currently active or retired peace officer

There are stipulations in the ordinance that solicit recommendations or consent from the county fire chiefs association, the Machesney Park board of trustees, and the county board for those specific members.

The ordinance grants the ETSB the authority “to create an emergency telephone system advisory board pursuant to 83 Illinois Administrative Code, Chapter I, Section 725.601; and to establish guidelines for the operation of the advisory board, to include but not be limited to, regularly scheduled grievance hearings on a quarterly basis”. The ETSB has not pursued this in the past and the ordinance likely will need to be updated based on the governance path chosen.

In 2005, the ETSB entered into an intergovernmental agreement (IGA) with the City of Rockford and the WCSO to operate two PSAPs. The initial term of the agreement was due to expire in 2015; it was amended to change the expiration date to the end of 2017.

The County PSAP is under the direct control of the elected Winnebago County sheriff and is supervised and managed by the chief deputy as part of the WCSO’s Support Services division. There are no formal governing or advisory bodies that provide input regarding the overall operation of the PSAP. The PSAP director did indicate that he attends a once-a-month “chiefs breakfast” to communicate with the outside agencies that the County PSAP serves. In August 2018, just before the release of the draft version of this report, the option of transferring the direct report of the PSAP and personnel away from the WCSO to the County administrator was explored. However, these efforts were abandoned and the structure remains.

The County PSAP entered into an agreement in 2006 with the City of Loves Park following the closure of the PSAP that previously was operated by the City of Loves Park. As part of this agreement, Loves Park pays the County a fee of approximately \$132,000 per year for police dispatch services. It appears that this agreement has been renewed each year, but during the development of this report, there were discussions at the County level about notifying Loves Park of the County’s intention to not renew the agreement going forward. However, the agreement requires that either party must give at least two years notice prior to termination.

The City PSAP is under the direct control of the Rockford Fire Department chief. There are no formal governing or advisory bodies that provide input regarding the overall operation of the City PSAP. However, the fire chief and PSAP director did indicate that they hold regular meetings to communicate with the rural fire protection districts that the City PSAP serves.

There are no formal agreements with the non-Rockford organizations that are served by the City PSAP. MCP only could find a “fee for rural fire dispatch service” that is published in the City’s fee schedule each year.

The initial agreement from 2005 between Winnebago County, the City of Rockford and the ETSB specifies that 50 percent of the cost of a 911 manager at both centers be paid with ETSB funds. The agreement also outlines some additional funding for Master Street Address Guide (MSAG) support services, training, and 4.6 full-time equivalents (FTE) of telecommunicators per shift. The agreement also states that Rockford is responsible for training personnel from both centers regarding the 911 telephone system. Both the City and County PSAPs’ budgets are reviewed by the ETSB in relation to how surcharge funds are utilized.

Compared with other ETSBs that MCP examined and has worked with, the role of the Winnebago County ETSB is generally more distanced. While day-to-day oversight of operations regularly rests with the entities

managing the PSAP, MCP has seen other occasions where ETSBs have a more active role in countywide strategic planning, training, and technical aspects, such as geographic information systems (GIS) and addressing support. In such instances, these functions usually are performed by ETSB employees.

2.4 Financial Analysis of Current Configuration

One thing became very evident when analyzing the PSAP and RDP expenses and cost models utilized by the various municipalities, public safety and 911 dispatch entities in Winnebago County—there is no consistency amongst any of them. Rather, there is a convoluted array of different cost-sharing arrangements once the call is processed and ready to be dispatched, as follows:

- Some municipalities and public safety organizations, such as the City of Rockford, the WCSO and the Harlem-Roscoe Fire Protection District, operate their own dispatch points and absorb the costs of dispatch into their municipal budgets.
- Some fire protection districts contract with the City PSAP, at a fee determined by Rockford each year. In 2017 and for 2018, the fee for “rural fire dispatch services” in Rockford was \$30 per call.
- The County PSAP has no specific policy or model for cost sharing with the municipal police departments that it serves. The City of Loves Park pays an annual fee based on an agreement that was made when the Loves Park PSAP disbanded. The City of Machesney Park paid a fee as well, which was a part of a patrol contract between the WCSO and Machesney Park. However, the County and Machesney Park indicated that they intend to terminate this contract, and it is undetermined at this point how this will impact the dispatch portion of the contract.
- MCP analyzed the dispatch arrangements and fees for the fire departments that are served by the two private hospital-based RDPs, ROCKCOM and MEDCOMM. Similar to the Machesney Park/WCSO arrangement, some of the dispatch services are provided as part of an overall agreement that includes EMS response in some of the communities. This was reported to be the case by the fire chief in North Park—the dispatch services provided by MEDCOMM are part of an overall arrangement with OSF/Lifeline to provide EMS response. The fire protection districts served by ROCKCOM reported an array of different costs for dispatch services—with per-call fees ranging from \$2.50 to \$6.50, and monthly fees ranging from \$400 to \$800.

The tables below indicate 2017 call volume and available fee for dispatch service information. The cost per call was determined by dividing the total 2017 dispatch fee or cost by the number of calls reported.

Regarding the cost projections that appear throughout the report, some of the fees that were not provided were estimated by MCP based on the best available information.

Table 1: Total Countywide Law Enforcement Dispatched Call Volume

Total Countywide Law Enforcement Dispatched Call Volume (2017): 326,984					
Agency	PSAP	Dispatch Center	2017 Calls	Annual Cost Paid by Agency for Dispatch Services	Notes
Cherry Valley PD	County PSAP	County PSAP	5,776		
Durand PD	County PSAP	County PSAP	880		
Loves Park PD	County PSAP	County PSAP	27,433	\$132,600	
Machesney Park PD	County PSAP	County PSAP	23,828	\$160,300	
Pecatonica PD	County PSAP	County PSAP	1,088		
Rock Valley College PD	City PSAP	City PSAP	65	\$0	No funding received as reported by City
Rockford Park District PD	City PSAP	City PSAP	3,560	\$0	No funding received as reported by City
Rockford PD	City PSAP	City PSAP	161,572	\$3,488,264	Based on the City PSAP line item from the 2017 PD budget
Rockton PD	County PSAP	County PSAP	7,452		
Roscoe PD	County PSAP	County PSAP	8,452		
South Beloit PD	County PSAP	County PSAP	5,733		
Winnebago (Village) PD	County PSAP	County PSAP	2,389		
Winnebago County SO	County PSAP	County PSAP	70,393	\$1,979,097	
Winnebago Animal Services	County PSAP	County PSAP	5,349	\$150,387	
Winnebago Coroner's Office	County PSAP	County PSAP	3,014	\$84,739	
Total				\$5,995,387	

Table 2: Total Countywide Fire and EMS Dispatched Call Volume

Total Countywide Fire/Ems Dispatched Call Volume (2017): 41,612					
Agency	911 PSAP	Dispatch Center	2017 Calls	Annual Cost Paid by Agency for Dispatch Services	Notes
Blackhawk FD	County PSAP	City PSAP	457	\$13,710	\$30/call per Rockford 2017 fee schedule
Cherry Valley FD	County PSAP	City PSAP	2,096	\$62,880	\$30/call per Rockford 2017 fee schedule
Durand FD	County PSAP	ROCCOM RDP	545	\$13,175	
Harlem-Roscoe FD	County PSAP	Harlem-Roscoe Fire Protection District RDP	3,077	\$122,000	Via landline; no CAD; MIP 5000 console/pager alerting; 11 staff work 12-hour shifts, mostly part time
Loves Park FD	County PSAP	ROCCOM RDP	448	\$4,480	2017 estimate used highest of ROCCOM options
New Milford FD	County PSAP	City PSAP	714	\$21,420	\$30/call as per Rockford 2017 fee schedule
North Park FD	County PSAP	ROCCOM RDP	1,442	\$18,973	Part of EMS agreement; not called out separately per email from FD chief
Northwest FD	County PSAP	City PSAP	520	\$15,690	\$30/call as per Rockford 2017 fee schedule
Pecatonica FD	County PSAP	ROCCOM RDP	331	\$11,752	2017 estimate used highest of ROCCOM options
Rockford FD	Rockford PSAP	City PSAP	28,835	\$1,378,779	Based on 2017 Rockford budget
Rockton FD	County PSAP	ROCCOM RDP	845	\$6,913	

Total Countywide Fire/Ems
Dispatched Call Volume (2017): 41,612

Agency	911 PSAP	Dispatch Center	2017 Calls	Annual Cost Paid by Agency for Dispatch Services	Notes
Shirland FD	County PSAP	ROCCOM RDP	77	\$10,101	Started with ROCCOM on 07/01/18
South Beloit FD	County PSAP	ROCCOM RDP	1,100	\$25,215	\$7/call quoted as per 2016 news article, but mayor reported \$14,280; 2016-17 agreement shows \$6.50/call and \$700 month, but this does not equal calculations or what the mayor reported
West Suburban FD	County PSAP	City PSAP	632	\$18,960	\$30/call as per Rockford 2017 fee schedule
Win-Bur-Sew FD	County PSAP	ROCCOM RDP	493	\$9,633	
Total				\$1,733,679	

MCP held a conference call with the County and City budget and finance personnel, who provided 2017 budget data for the County PSAP, the City PSAP and the ETSB. This data, combined with the RDP costs that MCP gathered, was reviewed during the conference call using a budgeting tool developed by MCP. The review serves as the basis for the following table, which provides a baseline cost for the current two-PSAP operation.

MCP adjusted the personnel costs in the baseline for both PSAPs based on their respective authorized staffing. In order to do this, MCP assumed the following adjustments for each PSAP:

- **Rockford PSAP Personnel Costs:** Additional \$325,728 for three vacant FTEs using IAFF Local 413 FTE median wage and benefits.
- **Winnebago County PSAP Personnel Costs:** Additional \$508,842 for eight vacant FTEs using WCSO telecommunicator median wage and benefits.

Table 3: Baseline Costs of Current Two-PSAP Configuration

Baseline Cost Projection – Based on 2017 Actual Costs as Reported by City, County, ETSB and RDPs					
	Rockford PSAP Cost	WCOS PSAP Cost	ETSB Cost	RDP Cost	Total Cost
Personnel Costs: Including actual reported costs for telecommunicator, administrative and management salaries, overtime and benefits, adjusted for vacancies (numbers represent authorized staffing)	\$4,590,660	\$2,250,360	\$6,693		\$6,847,714
Facility Costs: Including capital improvements, lease/rental payments, utilities, maintenance and recurring furniture costs	\$27,595	\$3,905	\$93,338		\$124,838
Equipment Maintenance Costs: Including current 911 call-handling equipment infrastructure, workstation and network costs, radio, CAD system, logging recorder and other miscellaneous systems	\$139,125	\$0	\$937,065	\$0	\$1,076,190
Other Network Costs: Including those not included in 911 call-handling equipment network costs (e.g., circuits, cellular)	\$0	\$2,900	\$0	\$0	\$2,900
Professional Services: Including legal, audit, GIS, translation and other professional services	\$31,489	\$1,800	\$109,868	\$0	\$143,157
Other Expenses: General operating/office expenses and other expenses not listed above	\$17,899	\$19,860	\$226,077	\$0	\$263,836
RDP Contract Fees (Estimated)				\$222,240	\$222,240

Baseline Cost Projection – Based on 2017 Actual Costs as Reported by City, County, ETSB and RDPs					
	Rockford PSAP Cost	WCSSO PSAP Cost	ETSB Cost	RDP Cost	Total Cost
Bond Payment⁴			\$476,250		\$476,250
Totals	\$4,806,768	\$2,278,825	\$1,849,291	\$222,240	\$9,157,126
Total 911 Calls (2017)	130,152	50,801	Total Population		295,266
Cost Per 911 Call (Each PSAP)	\$36.93	\$44.86	Cost Per Capita		\$31.01
Total Cost per 911 Call (180,953 total calls both PSAPs)	\$50.60				

3 Overview of Consolidation Options Considered

MCP was asked to analyze and consider several options in this report. Those options are summarized as follows:

City Full Governance

Per Winnebago County RFP 18P-2135 (Addendum 1), this option considers the full consolidation of 911 call-taking, and law enforcement, fire and EMS dispatch, under governance of the City of Rockford.

County Full Governance

Per Winnebago County RFP 18P-2135 (Addendum 1), this option considers the full consolidation of 911 call-taking, and law enforcement and fire and EMS dispatch under the governance of the County. For this option, MCP considered that the WCSSO would continue to oversee the County PSAP.

County Law Enforcement – Rockford Fire/EMS

Per Winnebago County RFP 18P-2135 (Addendum 1), this option considers the consolidation of all law enforcement dispatch under the governance of the County, with the City handling all fire/EMS dispatch.

Rockford and Alternate #1

Per Winnebago County RFP 18P-2135 (Addendum 1), this option considers placing City law enforcement dispatch under the governance of the City. County law enforcement dispatch would be under the governance of an alternate PSAP created by the municipalities. Fire/EMS dispatch would be under the governance of the City. This entails the outlying municipalities initiating and governing their own PSAP in

⁴ Final bond payment due 12/31/2019.

place of the County PSAP. MCP also was asked to consider the inclusion of County fire/EMS dispatch under the governance of the alternate PSAP.

Rockford and Alternate #2

Per Winnebago County RFP 18P-2135 (Addendum 1), this option considers placing City and County law enforcement dispatch under the governance of the City. Outlying municipalities' law enforcement dispatch would be under the governance of an alternate PSAP created by the municipalities. Fire/EMS dispatch would be under the governance of the City. This entails the outlying municipalities initiating and governing their own PSAP in place of the County PSAP. MCP also was asked to consider the inclusion of County Fire/EMS dispatch under governance of the alternate PSAP.

Regional Center and Other Options

Per Winnebago County RFP 18P-2135 (Addendum 1), MCP was asked to consider options for more regional collaboration or outsourcing of services to handle adjacent counties or smaller municipalities.

This option certainly presents some future opportunities to the stakeholders in Winnebago County. The NINGA, STARCOM and CAD system projects all pave the way for the surrounding counties to collaborate on technological capabilities. It only would be logical to explore the operational, governance and financial benefits that also are possible from such collaborations. However, given the current lack of governance structure and the need to correct that problem in the short term within Winnebago County alone, MCP cannot envision any regional option at this point that could be successful without significant further study outside of the scope of this project. MCP recommends that the ETSB continue with further analysis of the technological projects and environment in surrounding counties' PSAPs and reevaluate after a workable governance solution is reached within Winnebago County. When a sound governance structure is in place, it is very likely that resources outside of the county could be combined into those PSAPs and potentially reduce costs for participants.

4 Technology/Facility Considerations

4.1 City Full Governance

If the ETSB elects to move forward with consolidation to Rockford as the primary PSAP, the following technology changes will need to be considered.

- Continue with the ongoing CAD system replacement project funded by the ETSB.
- Replacement of the existing VIPER call-handling system would need to be completed in conjunction with the new CHE being implemented through the NINGA project, including reconfiguration of the 911 trunks.
- The current backup configuration—which allows Winnebago County 911 calls to be transferred to Rockford—was designed only as a temporary solution. As part of the NINGA project, the 911 trunks will be routed to the two planned data centers. MCP recommends any consolidation be coordinated with the NINGA project to avoid any unnecessary or duplicate expense for 911 trunks.

- Because both PSAPs utilize the STARCOM radio system, no significant changes would be needed regarding law enforcement dispatch, other than a console programming change.
- If the City's PSAP wants to begin dispatching other municipal fire/EMS services, then remote radio capabilities would need to be established, either via radio control stations or direct connectivity to the base stations via copper or fiber lines.
- In addition, the logging recorders would need to be reconfigured for the appropriate radio channels and phone lines.
- As mentioned in Section 2.1.5, if the County were to no longer maintain its own PSAP, arrangements would need to be made with the Winnebago County Emergency Services and Disaster Agency to address how the activation of the community warning sirens would be handled.

If this option was selected, MCP concurs with the 2015 study recommendation that that the ETSB should utilize the County PSAP as a hot-standby backup facility that is exercised on a regular basis. Due to a clause in the IGA, MCP does not recommend complete abandonment of the County PSAP. Once the NINGA project is online, the ETSB could explore backup options with other counties on the NINGA system to reduce costs. Either a hot standby solution or a regional partner can serve as a capable backup to a single PSAP—however, MCP recommends that a comprehensive Continuity of Operations Plan (COOP) be developed that considers all facility, operational and technological factors.

4.2 County Full Governance

Technology considerations regarding a consolidation of all services at the County PSAP are similar to those if the consolidation were to occur at the City PSAP.

- The most notable addition would be the need to relocate the Rockford Alarm central station receiver. As noted above, any consolidation that can be coordinated with the NINGA project likely will decrease duplicate trunk costs and reduce the trunk count coordinated with AT&T, the current provider.
- The County PSAP has a generator and uninterruptible power supply (UPS) system to support its operations.

The ETSB should attempt to utilize the City PSAP, with the City's concurrence, if it is abandoned due to this option, as a hot-standby backup facility that is exercised on a regular basis. Due to a clause in the IGA, MCP does not recommend complete abandonment of the City PSAP. Once the NINGA project is online, the ETSB could explore backup options with other counties on the NINGA system to reduce costs.

4.3 County Law Enforcement – Rockford Fire/EMS

The most notable technology change under this configuration would be the need to ensure that the City has access to the required fire/EMS radio frequencies. Rockford already has access to radio frequencies for the five municipal departments it currently dispatches. All departments outside of Rockford operate in the VHF band. Rockford police department would continue to operate on the STARCOM 21 system.

In addition, the logging recorders would need to be reconfigured for the appropriate radio channels and phone lines.

4.4 Rockford and Alternate #1

Because the IGA states that the County PSAP only can be used for 911 purposes, MCP recommends that, if this option is chosen, control of the County PSAP be turned over to the new governing board or authority. This would allow the use of existing technology already in place.

4.5 Rockford and Alternate #2

As with the option immediately above, MCP recommends the use of the County PSAP for municipal law enforcement dispatch if this option is chosen.

5 Operations/Staffing Considerations

To extrapolate the primary cost in any dispatch operation—i.e., personnel costs—to the various options analyzed in this report, MCP conducted a thorough staffing projection for each of the options outlined in the RFP. Concerning salaries, MCP utilized the most appropriate existing collective bargaining unit applicable to each option. This is outlined in detail in the financial considerations where the staffing needs are translated into estimated costs.

The baseline personnel costs were developed using ***actual*** budget figures from 2017. Records provided to MCP indicated eight open AFSCME⁵ positions at the County PSAP and three open AFSCME positions at the City PSAP. MCP adjusted both PSAPs' baseline personnel costs on these open positions, utilizing each of the contract's median total compensation. However, all options calculated below are based on the ***recommended*** staffing levels following MCP's standards-based analysis of call volumes and activity. All options also take into consideration the staffing costs associated with fire and EMS dispatching as part of the operation where appropriate. This is called out in each option to which it is applicable.

To improve emergency response, any solution should seek to reduce the amount of call transfers that occur. With this in mind, MCP's calculations also were based on countywide figures for fire and EMS—not as the current situation is configured with various RDPs handling some of the dispatch workload.

The various governance models and a summary of their associated personnel needs are described in Table 4 below. Following the table is a description of how MCP arrived at the calculations for each option. A further description of the staffing methodology that MCP utilizes is included in Appendix 1.

⁵ American Federation of State, County and Municipal Employees.

MCP recommends that, if Winnebago County continues to utilize RDPs, the ETSB should establish minimum standards for RDPs to continue receiving 911 calls from the selected PSAPs. MCP has reviewed 50 ILCS 750/15.4, as well as the other sections of the Act, and has concluded that there is justification and ample authority for the ETSB to do so. These standards should aim to bring the same level of service to the RDPs that exists at both PSAPs today, including the following requirements:

- The RDP should receive the caller location and identification information as part of the transfer.
- The RDP should meet a minimum level of training specified by the ETSB, including but not limited to the emergency medical dispatch protocol in use countywide.
- The RDP should be required to meet a minimum level of reporting requirements to the ETSB so that countywide statistics may be compiled such as:
 - Call volume data
 - Emergency and non-emergency duties and activity data
 - Training records and verifications
- The RDP should be sufficiently staffed (based on non-emergency and ancillary tasks that also are being performed) to provide full attention to any potential 911 transfers being received.
- For this report MCP was not scoped to provide a review of the operations or facilities of the RDPs. However, we offer input on the following observations:
 - The agencies served by the RDPs report their service to be efficient and cost effective
 - The RDPs and the responders do not have direct communications with law enforcement

MCP recommends in any scenarios that involve multiple PSAPs, that the ETSB consider developing a paid leadership and support structure. MCP recommends that the ETSB incrementally, as funding permits, hire the following as ETSB employees:

- Countywide 911 director
- Countywide MSAG coordinator
- Countywide technical services coordinator
- Countywide training and quality assurance coordinator

This would be instead of funding 50 percent of the same salaries at the respective PSAPs. Some of the positions are vacant; if job performance and institutional knowledge is satisfactory, MCP recommends that the existing personnel be transitioned into the same roles at the ETSB level if possible.

Table 4: Summary of Personnel Needs Per Option

Personnel Needs	Day Shift Staffing	Night Shift Staffing
Rockford Full Governance		
Total Staff: 84		
<p>8 Supervisors 76 Telecommunicators</p> <p>Increase supervisory staff over long-term to 12</p>	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 20 telecommunicators per shift to staff 12 to 14 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 5 call-takers (to meet national standards) • 4 to 6 law enforcement dispatchers (subject to determination by the governing body) • 3 fire/EMS dispatchers 	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 18 telecommunicators per shift to staff 11 to 13 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 4 call-takers (to meet national standards) • 4 to 6 law enforcement dispatchers (subject to determination by the governing body) • 3 fire/EMS dispatchers
County Full Governance		
Total Staff: 84		
<p>8 Supervisors 76 Telecommunicators</p> <p>Increase supervisory staff over long-term to 12</p>	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 20 telecommunicators per shift to staff 12 to 14 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 5 call-takers (to meet national standards) • 4 to 6 law enforcement dispatchers (subject to determination by the governing body) • 3 fire/EMS dispatchers 	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 18 telecommunicators per shift to staff 11 to 13 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 4 call-takers (to meet national standards) • 4 to 6 law enforcement dispatchers (subject to determination by the governing body) • 3 fire/EMS dispatchers

Personnel Needs	Day Shift Staffing	Night Shift Staffing
County Law – Rockford Fire/EMS		
Total Staff: 100		
Winnebago County Staff: 64 8 Supervisors 56 Telecommunicators	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 14 telecommunicators per shift to staff 9 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 4 call-takers (to meet national standards) • 5 law enforcement dispatchers (subject to determination by the governing body) 	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 14 telecommunicators per shift to staff 9 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 4 call-takers (to meet national standards) • 5 law enforcement dispatchers (subject to determination by the governing body)
Rockford Fire/EMS Staff: 36 4 Supervisors 32 Telecommunicators	<ul style="list-style-type: none"> • 1 supervisor per shift • 8 telecommunicators per shift to staff 5 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 2 call-takers • 3 fire/EMS dispatchers 	<ul style="list-style-type: none"> • 1 supervisor per shift • 8 telecommunicators per shift to staff 5 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 2 call-takers • 3 fire/EMS dispatchers
Rockford and Alternate #1		
Total Staff: 106		
Rockford Law and All Fire/EMS Staff: 66 8 Supervisors 58 Telecommunicators	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 15 telecommunicators per shift to staff 10 to 11 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 4 to 5 call-takers (to meet national standards) • 3 law enforcement dispatchers (subject to determination by the governing body) • 3 fire/EMS dispatchers 	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 14 telecommunicators per shift to staff 10 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 4 call-takers (to meet national standards) • 3 law enforcement dispatchers (subject to determination by the governing body) • 3 fire/EMS dispatchers

Personnel Needs	Day Shift Staffing	Night Shift Staffing
<p>County Staff: 40</p> <p>4 Supervisors 36 Telecommunicators</p>	<ul style="list-style-type: none"> • 1 supervisor per shift • 9 telecommunicators per shift to staff 6 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 3 call-takers (to meet national standards) • 3 law enforcement dispatchers (subject to determination by the governing body) 	<ul style="list-style-type: none"> • 1 supervisor per shift • 9 telecommunicators per shift to staff 6 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 3 call-takers (to meet national standards) • 3 law enforcement dispatchers (subject to determination by the governing body)
Rockford and Alternate #2		
Total Staff: 100		
<p>Rockford Law (with County) and All Fire/EMS Staff: 84</p> <p>8 Supervisors 76 Telecommunicators</p> <p>Increase supervisory staff over long-term to 12</p>	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 20 telecommunicators per shift to staff 13 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 5 call-takers (to meet national standards) • 5 law enforcement dispatchers (subject to determination by the governing body) • 3 fire/EMS dispatchers 	<ul style="list-style-type: none"> • 2 supervisors per shift <ul style="list-style-type: none"> • 1 supervisor • 1 assistant supervisor • 18 telecommunicators per shift to staff 12 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 4 call-takers (to meet national standards) • 5 law enforcement dispatchers (subject to determination by the governing body) • 3 fire/EMS dispatchers
<p>Municipal PSAP Staffing: Total of 16</p> <p>16 Telecommunicators</p> <p>Working Supervisor or Lead Telecommunicator / No dedicated supervisor required in this option</p>	<ul style="list-style-type: none"> • 4 telecommunicators per shift to staff 2 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 1 call-taker (to meet national standards) • 1 law enforcement dispatcher (subject to determination by the governing body) 	<ul style="list-style-type: none"> • 4 telecommunicators per shift to staff 2 positions and allow breaks/meals and time off <ul style="list-style-type: none"> • 1 call-taker (to meet national standards) • 1 law enforcement dispatcher (subject to determination by the governing body)

5.1 City Full Governance

Minimum staffing for the City PSAP is eight positions: two fire dispatchers, three law enforcement dispatchers, and three call-takers. The City PSAP would like to staff three fire dispatchers, seven law enforcement dispatchers, and three call-takes. Minimum staffing for the County PSAP is four positions: three law enforcement dispatchers and one call-taker; fire and EMS incidents are transferred to other agencies for dispatch. Both PSAPs have supervisor positions that normally are staffed.

In a larger PSAP, such as the one that a consolidation between Winnebago County and Rockford would produce, operating in a horizontal configuration is best, i.e., with a division of responsibilities between the call-taker and dispatcher functions. In a horizontal center, dispatch is not delayed while information is gathered from the caller. In a vertical configuration, a telecommunicator performs the call-taker and dispatcher functions, handling a call from beginning to end, and at the same time is responsible for dispatching first responders and monitoring radio traffic. In a vertical configuration, the telecommunicator may be faced with determining which takes precedence—handling a call presenting a life-threatening situation or dispatching responders to a potentially life-threatening incident. While both Winnebago County and Rockford have dedicated call-takers, there may be times when dispatchers also need to answer incoming calls for service. When determining approximate staffing for full consolidation between Winnebago County and Rockford, MCP used the horizontal configuration. This is not to imply that telecommunicators are not cross-trained, just that there should be a division of responsibility.

Regardless of whether Winnebago County or Rockford has operational oversight, staffing for a full consolidation will be the same.

5.1.1 Call-Takers

In 2017, the County and City PSAPs combined answered nearly 400,000 calls, as indicated in the table below.

Table 5: Combined Calls Handled in 2017

	911	Administrative	Total
2017	185,695 ⁶	213,893	399,588

Of these, 4,752 calls were abandoned.⁷ Outbound call volume, which also adds to the workload, was provided only by Winnebago County.⁸ As is evidenced above, the majority of calls received by the two centers are non-emergency, or administrative, calls.

⁶ This includes 6,882 VoIP calls from Rockford; Winnebago County did not provide VoIP call data.

⁷ This information is from Winnebago County; Rockford did not provide abandoned call counts.

⁸ Outbound call volume for Winnebago County for 2017 was 69,796.

To determine the staffing needed to handle the incoming call volume, calls can be parsed by the hour of the day and evaluated with Erlang C calculations. The average incoming 911 calls per hour is derived from 2017 calls-per-hour data.

As noted in the Staffing Analysis Methodology in Appendix 1, PSAPs typically try to align their call-answering goals to National Emergency Number Association (NENA) or National Fire Protection Association (NFPA) standards. NENA’s call-answering standard is 90 percent of all 911 calls answered within 10 seconds during the busy hour (95 percent answered with 20 seconds), while NFPA’s is 95 percent answered within 15 seconds (99 percent answered within 40 seconds).

As indicated in the table below, there are only a few hours of the day where staffing requirements are higher to meet NFPA standards.

Table 6: 911 Call Handling

Average Handling Time	110⁹	seconds	110	seconds	105 seconds
Reporting Period	60	minutes	60	minutes	60 minutes
Required service level	90%¹⁰		95%¹¹		95%¹²
Target answer time (secs)	10	seconds	15	seconds	15
Shrinkage	0%		0%		26%
Hour	Incoming calls	Call-Takers Required	Incoming calls	Call-Takers Required	Shrinkage Factor
0:00	17	2	17	3	4
1:00	14	2	14	3	4
2:00	12	2	12	2	3
3:00	10	2	10	2	3
4:00	9	2	9	2	3
5:00	7	2	7	2	3
6:00	8	2	8	2	3
7:00	10	2	10	2	3
8:00	13	2	13	3	4
9:00	16	2	16	3	4
10:00	18	3	18	3	4
11:00	22	3	22	3	4
12:00	24	3	24	3	4
13:00	26	3	26	3	4
14:00	26	3	26	3	4

⁹ The average call processing times for Winnebago County and Rockford were not provided. MCP used an average of 1 minute, 45 seconds (105 seconds) to process 911 calls, with 5 seconds for wrap-up. Staffing requirements change little until the processing time is 2 minutes, 30 seconds.

¹⁰ NENA standard

¹¹ Ibid.

¹² Ibid.

Hour	Incoming calls	Call-Takers Required	Incoming calls	Call-Takers Required	Shrinkage Factor
15:00	29	3	29	4	5
16:00	29	3	29	4	5
17:00	32	3	32	4	5
18:00	30	3	30	4	5
19:00	28	3	28	3	4
20:00	27	3	27	3	4
21:00	26	3	26	3	4
22:00	24	3	24	3	4
23:00	21	3	21	3	4

At the busiest hour (17:00 or 5:00 p.m.), 32 emergency calls are received on average. This yields a traffic intensity of 0.93 Erlangs, requiring four to five telecommunicators.

$$\text{Erlangs} = (\text{Incoming calls} * \text{Average Handling Time}/3600) * (60/\text{Time Period})$$

$$\text{Erlangs} = (32*105/3600) * (60/60)$$

$$\text{Erlangs} = (3360/3600) * 1$$

$$\text{Erlangs} = .93 * 1$$

$$\text{Erlangs} = 0.93$$

Once the Erlangs are calculated, the number of positions needed to ensure a P.01 grade of service are assigned to the respective Erlang, as indicated in the table below. A P.01 grade of service means that no more than 1 call in 100 is blocked.

Table 7: Erlangs-to-Positions Correlation

Erlangs	.46	.87	1.36	1.91	2.50	3.13	3.78	4.46	5.16	5.88	6.61	7.35	8.11
Positions	3	4	5	6	7	8	9	10	11	12	13	14	15

Essentially what the calculations show is that a minimum of three to four telecommunicators, depending on the hour of the day, must be available to answer incoming calls to meet national standards.

As call volume varies, so does staffing. During many hours, only three telecommunicators are needed to answer incoming 911 calls. It should be noted that these numbers do not represent a shrinkage factor, i.e., time away from the job, such as for vacations or breaks. With a true availability of approximately 69 to 74 percent, depending on the factors, the shrinkage factor is 26 to 31 percent. This increases the number of

telecommunicators assigned to a respective shift to cover breaks and meals, as well as provide enough staffing to allow for time off.

The same premise can be applied to non-emergency/administrative calls, but the parameters change because no need exists to answer these calls with the same level of service. The parameters can be determined by the agency, but MCP used 75 percent of non-emergency/administrative calls answered within 1 minute. As call-processing times were not available, MCP used 100 seconds as the processing time and assumed that the majority of non-emergency/administrative calls would be during daylight hours, and not overnight, as no breakdown was provided. This requires two additional telecommunicators. Applying the shrinkage factor increases staffing for non-emergency/administrative calls to three. However, as such calls are not the primary function of a PSAP, these calls can ring longer or be placed on hold. As such, a shrinkage factor may not be necessary as on-duty call-takers would handle non-emergency /administrative calls when not on a 911 call. One particular area that some communities have successfully researched and pursued is that of a separate non-emergency call center that can help to alleviate some of the burden on the emergency call center. This could be implemented in conjunction with the concept of a non-emergency universal number, e.g., 311.

When combined with the 911 call data, this would imply that six to seven call-takers are needed during the busiest hours of the day to handle all incoming calls, dropping to five at other times. This could mean 30 telecommunicators to just answer calls—essentially eight assigned to each day shift and seven to each night shift. The busy hours also can be considered when operationally the PSAP leadership is determining the appropriate schedules and start times.

Erlang C calculations do not consider attrition, which will remain. This must be taken into consideration when determining staffing needs.

The traffic intensity for 911 calls was 0.93 Erlangs, corresponding to the need for four to five positions to handle 911 calls to achieve a P.01 grade of service. This also translates to the need to have the positions staffed. From NENA calculations, staffing one position 24 hours a day, 7 days a week (24 x 7) requires 5.8 people, without attrition, as indicated in the table below. Thus, staffing four positions, for example, 24/7 requires 23.2 people (26 with attrition); five positions, 29 people (32.5 with attrition).

Table 8: Call-Taker Coverage

FTEs for Call-Taker Positions		
A	1	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	8,736	Total hours needing coverage (A x B x C x D)
Telecommunicator Availability		
F	1,505.09	True availability per telecommunicator (hours per year)
FTEs Needed		
G	5.8	FTE base estimate (FTE) = E / F
H	12.4%	Attrition rate
I	6.5	FTEs required to accommodate turnover

While both Erlang C and NENA calculations consider the hours away from the console, they do not consider the number of telecommunicators that are out at any given time. However, leave usage tends to be higher during the summer months.

5.1.2 Dispatchers

5.1.2.1 Law Dispatchers

In 2017, the County and City PSAPs combined processed 326,984 law enforcement incidents. While the majority of incidents were initiated by callers, Winnebago County's incident data reveals that in 2017, 23 percent of law enforcement incidents were self-initiated by field responders. This could include traffic stops, suspicious persons and warrant service, essentially anything not called in by the public.

One of the statistics used in calculating dispatcher workloads is the average time spent on incidents. This information was provided by Winnebago County, but not Rockford. In MCP's experience with numerous staffing studies, the average time spent on law enforcement incidents ranges from 30 minutes to 38 minutes. Erring on the side of caution, MCP used 45 minutes per incident because Rockford's data was unavailable.

NENA's calculations for volume-based staffing consider that a dispatcher can handle more than one incident at a time. Based on MCP's experience, and taking into account data from other PSAPs, it is estimated that fire dispatchers can simultaneously handle two incidents, EMS dispatchers can handle five or six, and law enforcement dispatchers can handle seven to 13. However, these are subjective numbers that refer to routine incidents, not major incidents. For this assessment, MCP used ten incidents for law enforcement.

While a breakdown of calls by hour was available, no breakdown of incidents per shift was provided. As a result, MCP used the percentage of the calls attributed to the day shift to estimate the number of incidents per shift.

Table 9: Law Enforcement Volume-Based Staffing

FTEs for Law Enforcement Dispatcher Positions		
Position:		Law Enforcement Dispatcher (0600 to 1800 hours)
A	178,193	Total law enforcement incident volume
B	10	Number of simultaneous incidents that can be handled by one dispatcher
C	17,819.30	Incident volume adjusted (A / B)
D	0:45:00	Estimated average processing time for this position
E	1.33	Hourly processing capability (HPC) = 1 hour / D
F	13,364.48	Workload in hours (W) = C / E
Telecommunicator Availability:		
G	1,505.09	True availability per telecommunicator (hours per month)
FTEs Needed:		
H	8.88	FTE base estimate (FTE) = F / G
I	12.4%	Attrition rate
J	9.98	FTEs required to accommodate attrition
Position:		Law Enforcement Dispatcher (1800 to 0600 hours)
A	148,791	Total law enforcement incident volume
B	10	Number of simultaneous incidents that can be handled by one dispatcher
C	14,879.10	Incident volume adjusted (A / B)
D	0:45:00	Estimated average processing time for this position
E	1.33	Hourly processing capability (HPC) = 1 hour / D
F	11,159.33	Workload in hours (W) = C / E
Telecommunicator Availability:		
G	1,505.09	True availability per telecommunicator
FTEs Needed:		
H	7.41	FTE base estimate (FTE) = F / G
I	12.4%	Attrition rate
J	8.34	FTEs required to accommodate attrition
18.32		Total Number of FTE Law Dispatchers Needed

Based on workload (i.e., call volume), these calculations indicate that approximately 18 telecommunicators, with attrition, are needed to handle the annual law enforcement incidents within the county. Using a lower number of simultaneous incidents will result in the need for additional dispatch positions.

Staffing one position 24 x 7 requires six to seven people, as indicated in the table below.

Table 10: Law Enforcement Dispatcher Coverage

FTEs for Law Dispatcher Coverage		
Position:	Law Enforcement Dispatcher	
A	1	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	8,736	Total Hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1,505.09	True availability per telecommunicator (hours per year)
FTEs Needed:		
G	5.8	FTE base estimate (FTE) = E / F
H	12.4%	Attrition rate
I	6.5	FTEs required to accommodate turnover

Based on the total number of dispatchers needed and the coverage requirements for one position, slightly more than three positions theoretically could handle the current law enforcement incident volume for the entire county. There are other factors to consider, however, such as the number of frequencies being monitored and the number of field units for which each position is responsible. It will be up to the governing body to determine the operational configuration it intends to staff, understanding that each additional dispatch position requires at least five people to staff it 24 x 7.

The minimum number of law enforcement dispatch positions staffed by Winnebago County and Rockford is six, three each. The table below translates these positions into coverage-based staffing needs.

Table 11: Law Coverage-Based Staffing

FTEs for Law Dispatcher Coverage Positions		
Position:	Law Enforcement Dispatcher	
A	6	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	52,416	Total hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1,505.09	True availability per telecommunicator (hours per year)
FTEs Needed:		
G	34.8	FTE base estimate (FTE) = E / F
H	12.4%	Attrition rate
I	39.2	FTEs required to accommodate turnover

The above calculations are based on six positions, but the City PSAP has indicated that it would prefer to staff seven law enforcement positions in its current operations. Staffing seven positions at the City PSAP would require 46 people, with attrition. However, the need for seven positions is not supported by the call-volume data. While there may be other factors to consider, MCP cannot support the notion of seven positions at the City PSAP without additional data.

5.1.2.2 Fire/EMS Dispatchers

In 2017, the County and City PSAPs processed 41,612 fire and EMS incidents. Again, one of the statistics used in calculating dispatcher workloads is the average time spent on incidents. This information was not provided by Winnebago County or Rockford. Based on MCP's experience with numerous staffing studies, the average time for fire incidents is 35 minutes, while EMS incidents average 60 minutes. Erring on the side of caution, MCP used 60 minutes per incident, with the dispatcher handling two fire/EMS incidents simultaneously.

As noted earlier, NENA's calculations for volume-based staffing consider that a dispatcher can handle more than one incident at a time. Based on MCP's experience, and taking into account data from other PSAPs, a fire dispatcher can handle two incidents simultaneously, while an EMS dispatcher can handle five to six incidents. This is due to the number of units that are dispatched on true fire incidents, such as a residential fire, and that fire units are reactive, in circumstances that can change quickly.

While a breakdown of calls by hour was available, no breakdown of incidents per shift was provided. As a result, MCP used the percentage of the calls attributed to the day shift to estimate the number of incidents per shift.

Table 12: Fire/EMS Volume-Based Staffing

FTEs for Fire/EMS Dispatcher Positions		
Position:		Fire Dispatcher (0600 to 1800 hours)
A	21,878	Total fire incident volume
B	2	Number of simultaneous incidents that can be handled by one dispatcher
C	10,939.00	Incident volume adjusted (A / B)
D	1:00:00	Estimated average processing time for this position
E	1.00	Hourly processing capability (HPC) = 1 hour / D
F	10,939.00	Workload in hours (W) = C / E
Telecommunicator Availability:		
G	1505.09	True availability per telecommunicator
FTEs Needed:		
H	7.27	FTE base estimate (FTE) = F / G
I	12.4%	Attrition rate
J	8.17	FTEs required to accommodate attrition

FTEs for Fire/EMS Dispatcher Positions		
Position:		Fire/EMS Dispatcher (1800 to 0600 hours)
A	19,734	Total fire incident volume
B	2	Number of simultaneous incidents that can be handled by one dispatcher
C	9,867.00	Incident volume adjusted (A / B)
D	1:00:00	Estimated average processing time for this position
E	1.00	Hourly processing capability (HPC) = 1 hour / D
F	9,867.00	Workload in hours (W) = C / E
Telecommunicator Availability:		
G	1,505.09	True availability per telecommunicator
FTEs Needed:		
H	6.56	FTE base estimate (FTE) = F / G
I	12.4%	Attrition rate
J	7.37	FTEs required to accommodate attrition

15.54 Total Number of FTE Fire Dispatchers Needed
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As noted earlier, staffing one position 24 x 7 requires six to seven people, without attrition. The fire volume-based staffing indicates that 16 telecommunicators are needed, with attrition, the equivalent of three positions where each dispatcher is responsible for dispatch and tactical operations.

The City PSAP provided no indication of tactical positions or the configuration of fire operations.

In addition to true dispatch positions, tactical positions are also necessary, in alignment with national standards. NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*, Section 7.3.2, states, “When requested by the incident commander, a telecommunicator shall be dedicated to the incident and relieved of other duties within the communications center.”¹³ Explanatory material for this section states the following:

*The issue of communication capabilities and/or failures is cited by the National Institute for Occupational Safety and Health (NIOSH) as one of the top five reasons for fire fighter fatalities. The importance of an assigned telecommunicator for specific incidents is a critical factor in incident scene safety. The assignment process should be outlined in specific SOPs within each agency represented in the communications center. This assignment process is further assisted when a command/communications vehicle is being staffed at the incident scene.*¹⁴

When considering the transition to a consolidated environment, MCP recommends a realignment of fire operations to include tactical positions. MCP recommends all fire dispatch occur from one or two positions, based on the geographical layout of the county, with two tactical positions. Most incidents would not require switching to a tactical channel, so most radio traffic could remain on the main dispatch channel. Suspected fires or other incidents involving multiple fire units would switch to a tactical channel after dispatch, and the assigned telecommunicator would handle the incident.

MCP recommends that a minimum of three fire positions are staffed 24 x 7—one dispatch position and two tactical positions. Staffing three positions 24 x 7 requires a 17-person staff, with no attrition, as indicated in the table below.

¹³ “NFPA 1221, *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems*, National Fire Protection Association, 2016, <http://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1221>.

¹⁴ Ibid.

Table 13: Fire/EMS Coverage

FTEs for Fire/EMS Coverage Positions		
A	3	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	26,208	Total hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1,505.09	True availability per telecommunicator (hours per year)
FTEs Needed:		
G	17.4	FTE base estimate (FTE) = E / F
H	12.4%	Attrition rate
I	19.6	FTEs required to accommodate turnover

Staffing two tactical positions will provide the ability to meet the NFPA standard, which requires the PSAP to have a telecommunicator dedicated to an incident when requested and still provide fireground operations for other incidents. Staffing a total of four fire dispatch positions 24 x 7 increases the personnel requirements by six, to 23.

5.1.3 Staffing Configuration

Based on the call and incident data provided, MCP recommends the following positions are staffed 24 x 7 in a consolidated environment:

- Day Shift – 12 to 14 positions
 - 5 call-takers (to meet national standards)
 - 4 to 6 law enforcement dispatchers (subject to determination by the governing body)
 - 3 fire/EMS dispatchers
- Night Shift – 11 to 13 positions
 - 4 call-takers (to meet national standards)
 - 4 to 6 law enforcement dispatchers (subject to determination by the governing body)
 - 3 fire/EMS dispatchers

This operational configuration will require additional telecommunicators be on duty to provide breaks and meals, as approximately 12 hours of relief will be required in a 12-hour period, with two to three people likely out of the center simultaneously.

Staffing 13 positions on day shift requires approximately 42 people, with attrition. Staffing 12 positions on night shift requires 40 people, with attrition. This is a staff of 82 people, excluding supervisors.

MCP recommends that each day shift initially have a staff of 20 telecommunicators. This will provide sufficient coverage to staff the positions noted above, allow two to three people to be absent for leave

(vacation or sick) or training, and provide for breaks and meals. When there are no breaks or meals in progress, the relief positions would answer incoming calls for service.

MCP recommends that each night shift initially have a staff of 18 telecommunicators. This will provide sufficient coverage to staff the positions noted above, allow two to three people to be absent for leave (vacation or sick) or training, and provide for breaks and meals. While there are no breaks or meals in progress, the relief positions would answer incoming calls for service.

The operational configuration could be staggered to implement power shifts during the busiest hour, which will ensure that the center is not overstaffed in the early morning hours when call volumes generally decrease.

5.1.4 Supervision

Given the recommended composition of the shifts, MCP recommends two supervisors assigned to each shift; one supervisor with overall responsibility and then an assistant supervisor. When both the supervisor and assistant are on duty, the assistant supervisor could provide breaks, if needed, but would otherwise be available on the operations floor. This will more closely align a consolidated environment with best practices for span of control. Shift strength, overall, will be slightly higher than best practices prescribe. Telecommunicators work in a single location, and within two primary focus areas: call take and dispatch. However, focused supervision from the supervisor and assistant supervisor on the 911 floor should alleviate any concerns. This creates a better environment than a single person with oversight responsibility. When one of the two supervisors is not available, such as during leave or training, the responsibility will fall to one person.

MCP recommends that supervisory positions be re-evaluated after one year of operation to determine if additional supervisors are necessary on each shift.

5.1.5 Conclusion

A consolidation initiative presents an opportune time to reevaluate operations holistically and make changes to position the PSAP for the future, as proper staffing is a balance between providing quality service at a reasonable cost.

MCP recommends an initial complement of 76 telecommunicators and eight supervisors, increasing supervisory staff to 12 over the long-term if necessary, in alignment with best practices. This is a total of 84 staff, including the supervisors.

- Day Shift – 22 staff
 - 1 supervisor
 - 1 assistant supervisor
 - 20 telecommunicators
- Night Shift – 20 staff
 - 1 supervisor
 - 1 assistant supervisor
 - 18 telecommunicators

This will allow four to five call-taker positions to be consistently staffed each shift. This may mean that some administrative calls do not get answered as quickly or may get placed on hold while an incoming emergency line is answered. While these calls are important, they are not as important as emergency calls; thus, the calls can have a longer ring or hold time. This provides for five law enforcement dispatch positions and three fire/EMS dispatch/tactical positions.

If the governing entity elects to staff additional dispatch positions, staffing needs will increase by about five for each position. Currently it appears that more emphasis is placed on dispatch positions rather than on call-taking, which should be the initial focus, as a citizen's first contact with emergency services is through the person answering the phone.

5.2 County Full Governance

In a full consolidation of call-taking and dispatch, regardless of whether Winnebago County or Rockford has operational oversight, staffing will be the same.

As noted previously, based on the call and incident data provided, MCP recommends the following positions are staffed 24 x 7 in a consolidated environment:

- Day Shift – 12 to 14 positions
 - 5 call-takers (to meet national standards)
 - 4 to 6 law enforcement dispatchers (subject to determination by the governing body)
 - 3 fire/EMS dispatchers
- Night Shift – 11 to 13 positions
 - 4 call-takers (to meet national standards)
 - 4 to 6 law enforcement dispatchers (subject to determination by the governing body)
 - 3 fire/EMS dispatchers

This operational configuration will require additional telecommunicators be on duty to provide breaks and meals, as approximately 12 hours of relief will be required in a 12-hour period, with two to three people likely out of the center simultaneously.

MCP recommends an initial complement of 76 telecommunicators and eight supervisors, increasing supervisory staff to 12 over the long-term if necessary, in alignment with best practices. This is a total of 84 staff.

- Day Shift – 22 staff
 - 1 supervisor
 - 1 assistant supervisor
 - 20 telecommunicators
- Night Shift – 20 staff each
 - 1 supervisor
 - 1 assistant supervisor
 - 18 telecommunicators

This will allow four to five call-taker positions to be consistently staffed each shift. This may mean that some administrative calls do not get answered as quickly or may get placed on hold while an incoming emergency line is answered. While these calls are important, they are not as important as emergency

calls; thus, the calls can have a longer ring or hold time. This provides for five law enforcement dispatch positions and three fire/EMS dispatch/tactical positions.

5.3 County Law Enforcement – Rockford Fire/EMS

If operations were to remain separate with all law enforcement dispatch under the governance of Winnebago County and Rockford handling all fire/EMS dispatch, the dispatch positions to be staffed are the same; the primary difference is how call-taking will be handled, and the location(s) from which operations are conducted. This is not a recommended approach because 911 operations (call-taking and dispatch) already are fractured within the county and it is not a best practice to transfer callers needing assistance.

This could be handled by having most call takers remain with Winnebago County, as the law enforcement volume is greater than that of fire/EMS. However, this does not provide fire/EMS dispatchers with immediate access to the call-takers should there be questions. It also does not address the handling of administrative calls. The governing entities would need to decide how call-taking would be handled before a more accurate estimate as to the number of call-takers could be determined.

Of the incidents reported by Winnebago County for 2017, approximately 5 percent were for fire/EMS. Of the incidents reported by Rockford for 2017, approximately 17 percent were for fire/EMS. Overall, approximately 12 percent of the total incident volume is attributable to fire/EMS incidents. Thus, it is likely that the majority of 911 calls are requests for law enforcement. It is not possible to associate the non-emergency/administrative call volume to a respective discipline as many calls do not result in a call for service being initiated.

However, it is likely that four to five call-taker positions still would be needed in Winnebago County and two would be needed in Rockford in this scenario, per shift. This assumes that all 911 calls initially will be answered by Winnebago County and then processed there or transferred to Rockford if the request is for fire/EMS. Again, without knowing how 911 and non-emergency/administrative calls will be handled makes it difficult to provide a more accurate estimate.

Dispatch positions will remain the same for a full consolidation.

Based on the total number of law enforcement dispatchers needed and the coverage requirements for one position, slightly more than three positions, theoretically, could handle the current law enforcement incident volume for the entire county. There are other factors to consider, however, such as the number of frequencies being monitored and the number of field units for which each position is responsible. MCP recommends four to six dispatch positions, with the governing body determining the operational configuration it intends to staff, understanding that each additional dispatch position requires at least five people to staff it 24 x 7. Thus, staffing five law enforcement dispatch positions will require 29 to 33 people.

The fire volume-based staffing indicates that 16 telecommunicators are needed, with attrition, to handle the incident volume—the equivalent of three dispatch positions where each dispatcher is responsible for dispatch and tactical operations. MCP recommends a realignment of fire operations to include tactical positions. MCP recommends that all fire dispatch occur from one or two positions, based on the

geographical layout of the county, with two tactical positions. Most incidents would not require switching to a tactical channel, so most radio traffic could remain on the main dispatch channel. Suspected fires or other incidents with multiple fire units would switch to a tactical channel after dispatch, and the assigned telecommunicator would handle the incident. MCP recommends that a minimum of three fire positions are staffed 24 x 7—one dispatch position and two tactical positions. Thus, staffing three positions 24 x 7 requires a staff complement of 17 people with no attrition and 20 with attrition.

Staffing nine law enforcement positions (four call-takers and five dispatchers) in Winnebago County requires approximately 59 people, with attrition. MCP recommends beginning with a shift complement of 14. This will provide sufficient coverage to staff the positions noted above, allow two to three people to be absent for leave (vacation or sick) or training, and provide for breaks and meals. Each shift still will need supervision. The shift complements in Winnebago County would exceed the best practice of five to seven, warranting the recommendation of one supervisor and one assistant per shift. This is an additional eight people.

Staffing five positions (two call-takers and three fire/EMS dispatchers) in Rockford requires approximately 33 people, with attrition. MCP recommends beginning with a shift complement of eight. This will provide sufficient coverage to staff the positions noted above, allow one person to be absent for leave (vacation or sick) or training, and provide for breaks and meals. Each shift still will need supervision. While the best practice of five to seven subordinates is exceeded, the recommendation is one supervisor per shift, for four total.

In total, these two PSAPs represent a staff complement of 100 people—64 for Winnebago County and 36 for Rockford. Again, it should be noted that how incoming calls are handled could drastically change staffing for either PSAP. MCP does not recommend this configuration due to the fractured nature of operations.

5.4 Rockford and Alternate #1

In this configuration, City law enforcement and all fire/EMS would be under the governance of the City. County law enforcement would be under the governance of an alternate PSAP created by the municipalities. This is not a recommended approach as 911 operations (call-taking and dispatch) already are fractured within the county and it is not a best practice to transfer callers needing assistance. This approach also increases staffing requirements.

Again, the difference is in how call-taking will be handled, and the location(s) from which operations are conducted. Would Rockford initially answer all incoming 911 calls and transfer those for County law enforcement? Or would both centers serve as primary PSAPs, with the County law enforcement center transferring fire/EMS calls to Rockford? For this configuration, MCP assumes that each PSAP will serve as a primary PSAP, transferring calls as necessary.

5.4.1 Rockford

5.4.1.1 Call-Takers

The table below indicates the call volume handled by the City PSAP last year:

Year	911	Administrative	Totals
2017	130,142	163,054	293,196

Outbound call volume, which also adds to the workload, was not provided. As indicated above, most calls received by the City PSAP are non-emergency/administrative calls.

As noted previously, PSAPs typically try to align their call-answering goals with either NENA or NFPA standards. NENA's call answering standard is 90 percent of all 911 calls answered within 10 seconds during the busy hour (95 percent answered with 20 seconds), while NFPA's is 95 percent answered within 15 seconds (99 percent answered within 40 seconds). As indicated in the table below, there are only a few hours of the day when staffing requirements are higher to meet NFPA standards.

Table 14: City PSAP 911 Call Handling

Average handling time	110¹⁵	seconds	110	seconds	110 seconds
Reporting period	60	minutes	60	minutes	60 minutes
Required service level	90%¹⁶		95%¹⁷		95%¹⁸
Target answer time (seconds)	10	seconds	15	seconds	15
Shrinkage	0%		0%		26%
Hour	Incoming calls	Call-Takers Required	Incoming calls	Call-Takers Required	Shrinkage Factor
0:00	13	2	13	3	4
1:00	11	2	11	2	3
2:00	9	2	9	2	3
3:00	8	2	8	2	3
4:00	7	2	7	2	3
5:00	5	2	5	2	3
6:00	5	2	5	2	3

¹⁵ The average call processing times for Winnebago County and Rockford were not provided. MCP used an average of 1 minute, 45 seconds (105 seconds) to process 911 calls, with 5 seconds for wrap-up. Staffing requirements change little until the processing time is 2 minutes, 30 seconds.

¹⁶ NENA standard

¹⁷ Ibid.

¹⁸ Ibid.

Hour	Incoming calls	Call-Takers Required	Incoming calls	Call-Takers Required	Shrinkage Factor
7:00	6	2	6	2	3
8:00	8	2	8	2	3
9:00	11	2	11	2	3
10:00	12	2	12	2	3
11:00	15	2	15	3	4
12:00	17	2	17	3	4
13:00	18	3	18	3	4
14:00	18	3	18	3	4
15:00	20	3	20	3	4
16:00	20	3	20	3	4
17:00	23	3	23	3	4
18:00	21	3	21	3	4
19:00	20	3	20	3	4
20:00	19	3	19	3	4
21:00	19	3	19	3	4
22:00	18	3	18	3	4
23:00	16	2	16	3	4

At the busiest hour (17:00 or 5:00 p.m.), 23 emergency calls are received on average. This yields a traffic intensity of 0.7 Erlangs, requiring three telecommunicators for 911 calls.

The same premise can be applied to non-emergency/administrative calls, but the parameters change because there is no need to answer these calls with the same level of service. The parameters can be determined by the agency, but MCP used 75 percent of non-emergency/administrative calls answered within 1 minute. As call-processing times were not available, MCP used 100 seconds as the processing time and assumed that the majority of non-emergency/administrative calls would be during daylight hours, and not overnight, because no breakdown was provided. This requires two additional telecommunicators. Applying the shrinkage factor increases staffing for non-emergency/administrative calls to three. However, because such calls are not the primary function of a PSAP, these calls can ring longer or be placed on hold. As such, a shrinkage factor may not be necessary as on-duty call-takers would handle administrative calls when not on a 911 call.

5.4.1.2 Dispatchers

5.4.1.2.1 Law Dispatchers

In 2017, the City PSAP processed 161,572 law enforcement incidents for the Rockford police department.

One of the statistics used in calculating dispatcher workloads is the average time spent on incidents. This information was not provided by Winnebago County or Rockford. Based on MCP's experience with

numerous staffing studies, the average time to handle law enforcement incidents ranges from 30 minutes to 38 minutes. Erring on the side of caution, MCP used 45 minutes per incident.

NENA's calculations for volume-based staffing consider that a dispatcher can handle more than one incident at a time. In MCP's experience, taking into account data from other PSAPs, it is estimated that fire dispatchers can handle two simultaneous events, EMS dispatchers five or six, and law enforcement dispatchers seven to 13. However, these are subjective numbers that refer to routine incidents, not major incidents. For this assessment, MCP used ten events for law enforcement dispatch.

Table 15: Law Enforcement Volume-Based Staffing

FTEs for Law Enforcement Dispatcher Positions		
A	161,572	Total law enforcement incident volume
B	10	Number of simultaneous incidents that can be handled by one dispatcher
C	16,157.20	Incident volume adjusted (A / B)
D	0:45	Estimated average processing time for this position
E	1.33	Hourly processing capability (HPC) = 1 hour / D
F	12,117.90	Workload in hours (W) = C / E
Telecommunicator Availability:		
G	1,478.22	True availability per telecommunicator (hours per year)
FTEs Needed:		
H	8.20	FTE base estimate (FTE) = F / G
I	13.0%	Attrition rate
J	9.26	FTEs required to accommodate attrition

Based on workload (i.e., call volume), these calculations indicate that approximately nine telecommunicators, with attrition, are needed to handle the annual law enforcement incidents within the county. Using a lower number of simultaneous incidents will result in the need for additional dispatch positions. Staffing one position 24 x 7 requires six to seven people, as indicated in the table below.

Table 16: Law Enforcement Coverage

FTEs for Law Enforcement Dispatcher Coverage		
Position: Law Enforcement Dispatcher		
A	1	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	8,736	Total hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1,478.22	True availability per telecommunicator (hours per year)
FTEs Needed:		
G	5.9	FTE base estimate (FTE) = E / F
H	13.0%	Attrition rate
I	6.7	FTEs required to accommodate turnover

Based on the total number of dispatchers needed and the coverage requirements for one position, two positions, theoretically, could handle the law enforcement incident volume for the Rockford police department. There are other factors to consider, however, such as the number of frequencies being monitored and the number of field units for which each position is responsible. Rockford would need to determine the operational configuration it intends to staff, understanding that each additional dispatch position requires at least six people to staff it 24 x 7.

The minimum number of law enforcement dispatch positions staffed by the City PSAP is three. The table below translates these positions into coverage-based staffing needs.

Table 17: Law Enforcement Coverage-Based Staffing

FTEs for Law Enforcement Dispatcher Positions		
Position: Law Dispatcher		
A	3	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	26,208	Total hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1,478.22	True availability per telecommunicator (hours per year)
FTEs Needed:		
G	17.7	FTE base estimate (FTE) = E / F
H	13.0%	Attrition rate
I	20.0	FTEs required to accommodate turnover

As indicated, this approach requires approximately 18 people without attrition and 20 with attrition.

The City PSAP has indicated that it would prefer to staff seven law enforcement dispatcher positions in its current operations, which would require 47 people, with attrition, based on Rockford's provided data. However, the need for seven positions is not supported by the call-volume data. While there may be other factors to consider, MCP cannot support the notion of seven positions at the City PSAP without additional data.

5.4.1.2.2 Fire/EMS Dispatchers

The number of positions needed for fire/EMS dispatch remains as previously discussed.

The fire/EMS volume-based staffing indicates that 16 telecommunicators are needed, with attrition, to handle the incident volume, the equivalent of three dispatch positions where each dispatcher is responsible for dispatch and tactical operations. MCP recommends a realignment of fire operations to include tactical positions. MCP recommends that all fire dispatch occur from one or two positions, based on the geographical layout of the county, with two tactical positions. Most incidents would not require switching to a tactical channel, so most radio traffic could remain on the main dispatch channel. Suspected fires or other incidents with multiple fire units would switch to a tactical channel after dispatch, where the assigned telecommunicator would handle the incident. MCP recommends that a minimum of three fire positions are staffed 24 x 7—one dispatch position and two tactical positions. Thus, staffing three positions 24 x 7 requires a staff complement of 18 people with no attrition and 20 with attrition.

5.4.1.3 Supervision

With the recommended composition of the shifts, MCP recommends that two supervisors be assigned to each shift—one supervisor with overall responsibility and then an assistant supervisor. When both the supervisor and assistant are on duty, the assistant supervisor could provide breaks, if needed, but would otherwise be available on the operations floor. This creates a better environment than a single person with oversight responsibility. When one of the two supervisors is unavailable, such as for leave or training, the responsibility will fall to one person.

5.4.1.4 Conclusion

MCP recommends an initial complement of 58 telecommunicators and eight supervisors for a total of 66 people:

- Day Shift Complement
 - 1 supervisor
 - 1 assistant supervisor
 - 15 telecommunicators
- Night Shift Complement
 - 1 supervisor
 - 1 assistant supervisor
 - 14 telecommunicators

This will allow four to five call-taker positions, three law enforcement dispatcher positions,¹⁹ and three fire dispatcher positions to be consistently staffed each shift, while allowing two people off. This also allows two people to provide breaks and meals to staff.

As noted previously, if Rockford elects to staff additional dispatch positions, staffing needs will increase by about six for each position. It appears that more emphasis is placed on dispatchers rather than call-takers, which should be the initial focus because a citizen’s first contact with emergency services is through the person answering the phone.

5.4.2 County Law Enforcement

5.4.2.1 Call-Takers

The table below indicates the emergency call volume that the County PSAP handled last year.

Year	911	Administrative	Totals
2017	55,553 ²⁰	50,839	106,392

Outbound call volume, which also adds to the workload, was provided only by Winnebago County.²¹

As noted previously, PSAPs typically try to align their call-answering goals to either NENA or NFPA standards. NENA’s call-answering standard is 90 percent of all 911 calls answered within 10 seconds during the busy hour (95 percent answered with 20 seconds), while NFPA’s is 95 percent answered within 15 seconds (99 percent answered within 40 seconds). The table below indicates that there are only a few hours of the day when staffing requirements are higher to meet NFPA standards, and these are the overnight hours when call volumes tend to drop.

¹⁹ While two dispatch positions are needed based on volume, MCP assumed that the City PSAP would continue to operate as previously.

²⁰ Of these, 4,752 calls were abandoned.

²¹ Outbound call volume for Winnebago County for 2017 was 69,796.

Table 18: 911 Call Handling

Average Handling Time	110²²	seconds	110	seconds	110
Reporting Period	60	minutes	60	minutes	60 minutes
Required service level	90%²³		95%²⁴		95%²⁵
Target answer time (seconds)	10	seconds	15	seconds	15
Shrinkage	0%		0%		26%
Hour	Incoming calls	Call-Takers Required	Incoming calls	Call-Takers Required	Shrinkage Factor
0:00	4	2	4	2	3
1:00	3	1	3	2	3
2:00	3	1	3	2	3
3:00	2	1	2	2	3
4:00	2	1	2	2	3
5:00	2	1	2	2	3
6:00	3	1	3	2	3
7:00	4	2	4	2	3
8:00	5	2	5	2	3
9:00	5	2	5	2	3
10:00	6	2	6	2	3
11:00	7	2	7	2	3
12:00	7	2	7	2	3
13:00	8	2	8	2	3
14:00	8	2	8	2	3
15:00	9	2	9	2	3
16:00	9	2	9	2	3
17:00	9	2	9	2	3
18:00	9	2	9	2	3
19:00	8	2	8	2	3
20:00	8	2	8	2	3
21:00	7	2	7	2	4
22:00	6	2	6	2	4
23:00	5	2	5	2	4

²² The average call processing times for the County and City PSAPs were not provided. MCP used an average of 1 minute, 45 seconds (105 seconds) to process 911 calls, with 5 seconds for wrap-up. Staffing requirements change little until the processing time is 2 minutes, 30 seconds.

²³ NENA standard

²⁴ Ibid.

²⁵ Ibid.

During the busiest hours, nine 911 calls are received on average. This yields a traffic intensity of 0.3 Erlangs, requiring two telecommunicators for 911 calls.

The same premise can be applied to non-emergency/administrative calls, but the parameters change as there is no need to answer these calls with the same level of service. The parameters can be determined by the agency, but MCP used 75 percent of non-emergency administrative calls answered within one minute. Because data on call-processing times was not available, MCP used 100 seconds and assumed that the majority of non-emergency/administrative calls would be during daylight hours, and not overnight, as no breakdown was provided. This requires one additional telecommunicator.

5.4.2.2 Dispatchers

5.4.2.2.1 Law Enforcement Dispatchers

In 2017, the County PSAP processed 161,787 law enforcement incidents for County law enforcement agencies, while the City PSAP processed 3,625 incidents for the City of Rock Valley and the Rockford Park District.

One of the statistics used in calculating dispatcher workloads is the average time spent on incidents. This information was provided by Winnebago County, but not Rockford. In MCP's experience with numerous staffing studies, the average time spent on law enforcement incidents ranges from 30 minutes to 38 minutes, and Winnebago County's data showed alignment. Erring on the side of caution, MCP used 45 minutes per incident because Rockford's data was not available. NENA's calculations for volume-based staffing consider that a dispatcher can handle more than one incident at a time. In MCP's experience, taking into account data from other PSAPs, it is estimated that law enforcement dispatchers can handle from seven to 13 simultaneous incidents. These are subjective numbers that refer to routine incidents, not major incidents. For this assessment, MCP used ten simultaneous incidents for law enforcement.

Table 19: Law Volume-Based Staffing

FTEs for Law Enforcement Dispatcher Positions		
Position: Law Enforcement Dispatcher (0600 to 1800 hours)		
A	165,412	Total law enforcement incident volume
B	10	Number of simultaneous incidents that can be handled by one dispatcher
C	16,541.20	Incident volume adjusted (A / B)
D	0:45	Estimated average processing time for this position
E	1.33	Hourly processing capability (HPC) = 1 hour / D
F	12,405.90	Workload in hours (W) = C / E {calls per hour handled}
Telecommunicator Availability:		
G	1,478.22 ²⁶	True availability per telecommunicator (hours per month)
FTEs Needed:		
H	8.39	FTE base estimate (FTE) = F / G
I	10.3%	Attrition rate
J	9.26	FTEs required to accommodate attrition

Based on workload (i.e., call volume), these calculations indicate that approximately nine telecommunicators, with attrition, are needed to handle the annual law enforcement incidents within the county. Using a lower number of simultaneous incidents will result in the need for additional dispatch positions. Staffing one position 24 x 7 requires six to seven people, as indicated in the table below.

²⁶ As noted in the Staffing Analysis Methodology in Appendix 1, Winnebago County telecommunicators used significantly less leave than Rockford telecommunicators on average. However, it appeared that some data was missing. As a result, for an accurate comparison, the same leave data was used for the County law enforcement staffing estimate; however, the attrition rate did change.

Table 20: Law Enforcement Coverage

FTEs for Law Enforcement Dispatcher Coverage		
Position: Law Enforcement Dispatcher		
A	1	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	8,736	Total Hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1,478.22	True Availability per Telecommunicator
FTEs Needed:		
G	5.9	FTE base estimate (FTE) = E / F
H	10.3%	Attrition Rate
I	6.5	FTEs required to accommodate turnover

Based on the total number of dispatchers needed and the coverage requirements for one position, this indicates that two positions, theoretically, could handle the current incident volume for the County law enforcement agencies. There are other factors to consider, however, such as the number of frequencies being monitored and the number of field units for which each position is responsible. The governing entity would need to determine the operational configuration it intends to staff, understanding that each additional dispatch position requires at least six people to staff it 24 x 7.

The minimum number of law enforcement dispatch positions staffed in the county is three. The table below translates these positions into coverage-based staffing needs.

Table 21: Law Enforcement Coverage-Based Staffing

FTEs for Law Enforcement Dispatcher Positions		
Position:	Law Enforcement Dispatcher	
A	3	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	26,208	Total hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1,478.22	True availability per telecommunicator (hours per year)
FTEs Needed:		
G	17.7	FTE base estimate (FTE) = E / F
H	10.3%	Attrition rate
I	19.6	FTEs required to accommodate turnover

As indicated, this configuration requires approximately 18 people without attrition and 20 with attrition.

5.4.2.3 Supervision

With the recommended composition of the shifts, MCP recommends that one supervisor be assigned to each shift. MCP also recommends a lead telecommunicator position on each shift to serve as a supervisor when the shift supervisor is not available. While the span of control exceeds the best practice of five to seven, a lead telecommunicator often will be available to answer questions when the need arises.

5.4.2.4 Conclusion

MCP recommends an initial complement of 36 telecommunicators and four supervisors, for a total of 40 people as follows:

- Shift Complement
 - 1 supervisor
 - 9 telecommunicators

This will allow three call-taker positions and three law enforcement dispatcher positions²⁷ to be consistently staffed each shift, while allowing one person off. This also allows two people to provide breaks and meals.

²⁷ While two dispatch positions are needed based on volume, MCP assumed that County law enforcement dispatch would continue to operate as it has been.

As noted previously, if the governing body elects to staff additional dispatch positions, staffing needs will increase by about six for each position.

5.4.3 Staffing Summary

To summarize this configuration, Rockford law enforcement and all fire/EMS would be under the governance of the City. County law enforcement would be under the governance of an alternate PSAP created by the municipalities. This will require approximately 106 persons between the two centers—66 for Rockford (including eight supervisors) and 40 for the alternate PSAP (including four supervisors).

This is not a recommended approach because 911 operations (call-taking and dispatch) already are fractured within the county and it is not a best practice to transfer callers needing assistance. This approach also increases staffing requirements above that of a full consolidation.

5.5 Rockford and Alternate #2

In this configuration, City and County law enforcement and all fire/EMS would be under the governance of the City. Law enforcement for the outlying municipalities would be under the governance of an alternate PSAP created by the municipalities. Again, this is not a recommended approach because operations (call-taking and dispatch) already are fractured within the county and it is not a best practice to transfer callers needing assistance. This approach also increases staffing requirements.

Again, the difference lies in how call-taking will be handled, and the location(s) from which operations are conducted. For this configuration, MCP assumes that all 911 calls would route to the City PSAP and calls would be transferred to the alternate PSAP as necessary. MCP assumes that the majority of non-emergency/administrative calls currently handled by the County PSAP will continue in this scenario. However, this will be a decision point for the governing entity of the municipalities.

5.5.1 Rockford

5.5.1.1 Call-Takers

In this configuration, call-taker positions are the same as for a full consolidation.

The calculations indicate that a minimum of two to four telecommunicators, depending on the hour of the day, must be available to answer 911 incoming calls to meet national standards. Non-emergency/administrative calls require two additional telecommunicators.

MCP recommends that five call-taker positions are staffed consistently on day shift, with four positions staffed consistently on night shift.

5.5.1.2 Dispatchers

5.5.1.2.1 Law Enforcement Dispatchers

The County and City PSAPs combined processed 326,984 law enforcement incidents in 2017. Of these, 83,031 are attributed to other municipal law enforcement agencies. This leaves 243,953 law enforcement incidents attributed to City and County law enforcement operations.

One of the statistics used in calculating dispatcher workloads is the average time spent on incidents. This information was provided by Winnebago County, but not Rockford. In MCP's experience with numerous staffing studies, the average time spent on law enforcement incidents ranges 30 minutes to 38 minutes. Winnebago County's data showed alignment. Erring on the side of caution, MCP used 45 minutes per incident because Rockford's data was not available.

NENA's calculations for volume-based staffing consider that a dispatcher can handle more than one incident at a time. In MCP's experience, taking into account data from other PSAPs, it is estimated that fire dispatchers can handle two simultaneous incidents, EMS dispatchers five or six, and law enforcement dispatchers seven to 13. These are subjective numbers that refer to routine incidents, not major incidents. For this assessment, MCP used ten simultaneous incidents for law enforcement.

Table 22: Law Volume-Based Staffing

FTEs for Law Enforcement Dispatcher Positions		
Position:	Law Enforcement Dispatcher	
A	243,953	Total law enforcement incident volume
B	10	Number of simultaneous incidents that can be handled by one dispatcher
C	24,395.30	Incident volume adjusted (A / B)
D	0:45	Estimated average processing time for this position
E	1.33	Hourly Processing Capability (HPC) = 1 hour / D
F	18,296.48	Workload in hours (W) = C / E
Telecommunicator Availability:		
G	1,505.09	True availability per telecommunicator (hours per year)
FTEs Needed:		
H	12.16	FTE base estimate (FTE) = F / G
I	12.4%	Attrition rate
J	13.67	FTEs required to accommodate attrition

Based on workload (i.e., call volume), these calculations indicate that approximately 14 telecommunicators, with attrition, are needed to handle the annual law enforcement incidents within the county. Using a lower number of simultaneous incidents will result in the need for additional dispatch positions. Staffing one position 24 x 7 requires six to seven people, as indicated in the table below.

Table 23: Law Enforcement Coverage

FTEs for Law Enforcement Dispatcher Coverage		
Position: Law Enforcement Dispatcher		
A	1	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	8,736	Total hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1,505.09	True availability per telecommunicator (hours per year)
FTEs Needed:		
G	5.8	FTE base estimate (FTE) = E / F
H	12.4%	Attrition rate
I	6.5	FTEs required to accommodate turnover

Based on the total number of dispatchers needed and the coverage requirements for one position, this indicates that two positions, theoretically, could handle the current law enforcement incident volume for the City and County. There are other factors to consider, however, such as the number of frequencies being monitored and the number of field units for which each position is responsible. Rockford would need to determine the operational configuration it intends to staff, understanding that each additional dispatch position requires at least six people to staff it 24 x 7.

Currently the minimum number of law enforcement dispatch positions staffed by the City and County PSAPs combined is six. The table below translates these positions into coverage-based staffing.

Table 24: Law Coverage-based Staffing

FTEs for Law Dispatcher Coverage Positions		
Position: Law Dispatcher		
A	6	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	52416	Total Hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1505.09	True Availability per Telecommunicator
FTEs Needed:		
G	34.8	FTE base estimate (FTE) = E / F
H	12.4%	Attrition Rate
I	39.2	FTEs required to accommodate turnover

As shown, this configuration requires approximately 35 people without attrition and 39 with attrition.

With municipal law enforcement handled by another entity, this workload transitions, lowering the number of positions needed. Staffing five dispatch positions, as recommended in the full consolidation model, requires 33 people with attrition. Again, Rockford would need to determine the operational configuration it intends to staff.

5.5.1.2.2 Fire/EMS Dispatchers

The number of positions needed for fire/EMS dispatch remains as previously discussed.

The fire volume-based staffing indicates that 16 telecommunicators are needed, with attrition, to handle the incident volume—the equivalent of three dispatch positions where each dispatcher is responsible for dispatch and tactical operations. MCP recommends a realignment of fire operations to include tactical positions. MCP recommends that all fire dispatch occur from one or two positions, based on the geographical layout of the county, with two tactical positions. Most incidents would not require switching to a tactical channel, so most radio traffic could remain on the main dispatch channel. Suspected fires or other incidents with multiple fire units would switch to a tactical channel after dispatch, where the assigned telecommunicator would handle the incident. MCP recommends that a minimum of three fire positions are staffed 24 x 7—one dispatch position and two tactical positions. Thus, staffing three positions 24 x 7 requires a staff complement of 18 people with no attrition and 20 with attrition.

5.5.1.3 Supervision

With the recommended composition of the shifts, MCP recommends that two supervisors are assigned to each shift, one supervisor with overall responsibility and then an assistant supervisor. When both the supervisor and assistant are on duty, the assistant supervisor could provide breaks, if needed, but would otherwise be available on the operations floor. This creates a better environment than a single person with oversight responsibility. When one of the two supervisors is not available, such as for leave or training, the responsibility will fall to one person.

5.5.1.4 Conclusion

Based on the call and incident data provided, MCP recommends that the following positions are staffed 24 x 7 in this configuration:

- Day Shift – 13 positions
 - 5 call-takers (to meet national standards)
 - 5 law enforcement dispatchers (subject to determination by Rockford)
 - 3 fire/EMS dispatchers
- Night Shift – 12 positions
 - 4 call-takers (to meet national standards)
 - 5 law enforcement dispatchers (subject to determination by Rockford)
 - 3 fire/EMS dispatchers

This operational configuration will require additional telecommunicators to be on duty to provide breaks and meals, as approximately 12 to 13 hours of relief will be required in a 12-hour period, with two to three people likely out of the center simultaneously.

Staffing 13 positions on day shift requires approximately 42 people with attrition. Staffing 12 positions on night shift requires 40 people with attrition. This results in a staff of 82 people, excluding supervisors.

MCP recommends an initial complement of 76 telecommunicators and eight supervisors, increasing supervisory staff to 12 over the long-term if necessary, in alignment with best practices. This results in a staff of 84 people.

- Day Shifts – 22 staff each
 - 1 supervisor
 - 1 assistant supervisor
 - 20 telecommunicators
- Night Shifts – 20 staff each
 - 1 supervisor
 - 1 assistant supervisor
 - 18 telecommunicators

This will allow four to five call-taker positions to be consistently staffed each shift. This may mean that some non-emergency/administrative calls do not get answered as quickly or may get placed on hold while an incoming emergency line is answered. While these calls are important, they are not as important as emergency calls; thus, the calls can have a longer ring or hold time. This provides for five law enforcement dispatch positions and three fire/EMS dispatch/tactical positions.

MCP recommends that each day shift initially has a staff of 20 telecommunicators. This will provide sufficient coverage to staff the positions noted above, allow two to three people to be absent for leave (vacation or sick) or training, and provide for breaks and meals. When there are no breaks or meals in progress, the relief positions would answer incoming calls for service.

MCP recommends that each night shift initially has a staff of 18 telecommunicators. This will provide sufficient coverage to staff the positions noted above, allow two to three people to be absent for leave (vacation or sick) or training, and provide for breaks and meals. When there are no breaks or meals in progress, the relief positions would answer incoming calls for service.

The operational configuration could be staggered to implement power shifts during the busiest hour, which will ensure that the center is not overstaffed in the early morning hours when call volumes generally decrease.

5.5.2 Municipal Law Enforcement

In this configuration, only calls requiring the assistance of municipal law enforcement agencies will be transferred to the alternate PSAP. This includes the following agencies:

- Cherry Valley PD
- Durand PD

- Loves Park PD
- Machesney Park PD
- Pecatonica PD
- Roscoe PD
- Rockton PD
- South Beloit PD
- Village of Winnebago PD

Winnebago County Sheriff's Office, animal services, and the coroner's office would be handled by the City PSAP.

5.5.2.1 Call-Takers

It is not possible to extrapolate the total call data attributed specifically to the municipalities or to parse it by hour of the day. However, of the 83,031 municipal incidents tracked for 2017, 59,972 incidents were the result of 911 calls (19,414) and non-emergency/administrative calls (40,558) calls. This data was averaged to determine the call-taker positions that would be necessary.

Because hour-of-the-day calculations are not available strictly for the municipalities, the average calls per hour were calculated, yielding two 911 calls and five non-emergency/administrative calls per hour.

Using the same parameters identified previously, one call-taker position will need to be staffed 24 x 7.

5.5.2.2 Law Enforcement Dispatchers

One of the statistics used in calculating dispatcher workloads is the average time spent on incidents. This information was not provided by Winnebago County or Rockford. However, in MCP's experience with numerous staffing studies, the average time spent on law enforcement incidents ranges 30 minutes to 38 minutes. Erring on the side of caution, MCP used 45 minutes per incident.

NENA's calculations for volume-based staffing consider that a dispatcher can handle more than one incident at a time. In MCP's experience, taking into account data from other PSAPs, it is estimated that law enforcement dispatchers can handle seven to 13 simultaneous incidents. However, these are subjective numbers that refer to routine incidents, not major incidents. For this assessment, MCP used ten simultaneous incidents for law enforcement.

Table 25: Law Volume-Based Staffing

FTEs for Law Enforcement Dispatcher Positions		
Position: Law Enforcement Dispatcher (0600 to 1800 hours)		
A	83,031	Total law enforcement incident volume
B	10	Number of simultaneous incidents that can be handled by one dispatcher
C	8,303.10	Incident volume adjusted (A / B)
D	0:45	Estimated average processing time for this position
E	1.33	Hourly processing capability (HPC) = 1 hour / D
F	6,227.33	Workload in hours (W) = C / E
Telecommunicator Availability:		
G	1478.22 ²⁸	True availability per telecommunicator (hours per year)
FTEs Needed:		
H	4.21	FTE base estimate (FTE) = F / G
I	10.3%	Attrition rate
J	4.65	FTEs required to accommodate attrition

Based on workload (i.e., call volume), these calculations indicate that approximately five telecommunicators, with attrition, are needed to handle the annual law enforcement incidents within the county. Using a lower number of simultaneous incidents will result in the need for additional dispatch positions. Staffing one position 24 x 7 requires six to seven people, as indicated in the table below.

²⁸ As noted in the Staffing Analysis Methodology in Appendix 1, Winnebago County telecommunicators used significantly less leave than Rockford on average. However, some data appeared to be missing. As a result, for an accurate comparison, the same leave data for the County law enforcement staffing estimate was used. The attrition rate did change.

Table 26: Law Enforcement Coverage

FTEs for Law Enforcement Dispatcher Coverage		
Position:		Law Dispatcher
A	1	Total number of console positions to be covered
B	24	Number of hours per day that need to be covered
C	7	Number of days per week that need to be covered
D	52	Number of weeks per year that need to be covered
E	8,736	Total hours needing coverage (A x B x C x D)
Telecommunicator Availability:		
F	1,478.22	True availability per telecommunicator
FTEs Needed:		
G	5.9	FTE base estimate (FTE) = E / F
H	10.3%	Attrition rate
I	6.5	FTEs required to accommodate turnover

Based on the total number of dispatchers needed and the coverage requirements for one position, this indicates that one position, theoretically, could handle the current incident volume for the municipal law enforcement agencies. There are other factors to consider, however, such as the number of frequencies being monitored and the number of field units for which each position is responsible. It is also unlikely that all municipalities will work from a single frequency. The governing entity would need to determine the operational configuration it intends to staff, understanding that each additional dispatch position requires at least six people to staff it 24 x 7.

5.5.2.3 Supervision

With the composition of the shifts, a dedicated supervisor (not assigned to a dispatch position) is not warranted. MCP would recommend that one person per shift assumes overall responsibility, whether it be a working supervisor or a lead telecommunicator.

5.5.2.4 Conclusion

Based on incident volume, one call-taker position and one dispatcher position are needed. However, the municipal dispatch center could operate in a vertical configuration, with two dispatcher positions and telecommunicators performing both call-taking and dispatch functions. This still will require an additional person to provide breaks and meals. To allow for time off, each shift will need a fourth person.

MCP recommends an initial complement of 16 telecommunicators, four per shift. While technically only two positions need to be staffed, three per shift is the minimum to provide breaks and meals, and if a telecommunicator is out, staffing is down to two, which is not recommended. The third person, when not providing relief, would be the primary call-taker.

5.5.3 Staffing Summary

To summarize, in this configuration, Rockford and County law enforcement and all fire/EMS would be under the governance of the City. Law enforcement for the outlying municipalities would be under the governance of an alternate PSAP created by the municipalities. This will require approximately 100 persons between the two centers—84 for Rockford (including eight supervisors) and 16 for the alternate PSAP.

This is not a recommended approach as 911 operations (call-taking and dispatch) already are fractured within the county and it is not a best practice to transfer callers needing assistance. Such an approach also increases staffing requirements above that of a full consolidation.

5.6 Future Staffing

Predicting staff needs for the long-term is not as statistically simple as it used to be. Current calculations rely on statistical data, such as population changes, as well as historical call volume and incident volume data. However, the 911 community already has begun its transition to NG911, which has allowed new types of media into PSAPs that traditionally have been voice-centric. For instance, many PSAPs already accept text-to-911 calls. While this has proven, to date, to have little effect on current staffing needs, images and streaming video soon may be accepted by PSAPs. In addition, the number of devices with the capability to transmit data continually increases: body cameras, drones, smart home devices, personal and industrial sensors—the list continues to grow.

All these devices have the potential to transmit data to a PSAP in the future—what is unknown is how this will affect staffing in the digital age. It is likely that “digital analysts,” as the Police Executive Research Forum (PERF) notes, may be responsible for analyzing the information before it is shared with responders.²⁹ Will these analysts be in a PSAP? A fusion center? A real-time crime center? How PSAPs choose to approach the data that will be available, as well as the associated tasks, will be up to each agency unless a statewide approach is taken. Real potential exists that some of this information could be flowing into PSAPs in Illinois in the next five years.

Entities in Winnebago County are on the cusp of a potential consolidation initiative. This effort could take two to three years to achieve full maturation, considering the intricacies. One of the key decisions will be the operational configuration—that is, how call-taking and dispatch will occur and how many positions will be staffed. While not necessarily central to future staffing predictions, knowing this plays a key role in a PSAP’s ability to absorb any increase in workload.

²⁹ The Police Executive Research Forum published a critical issues document entitled *The Revolution in Emergency Communications* in November 2017 that looks at some of the issues that will need to be addressed for NG911. The report can be found here: <http://www.policeforum.org/assets/EmergencyCommunications.pdf>.

Winnebago County and Rockford have experienced population decreases since the 2010 United States Census, 3.6 percent and 4.1 percent, respectively. Fifty-nine percent of the county’s population decrease is attributable to the city’s decrease.

Table 27: Winnebago County Population Changes

Year	Winnebago County	City of Rockford
1990 ³⁰	254,292	Not available
2000	278,418	150,115
2010	295,266	152,871
2017 (estimate)	284,778	147,051

For two decades, Winnebago County saw an increase in population, followed by a decrease since the 2010 Census. A March 2017 report by the Urban Institute, *The Future of the Great Lakes Region*, noted:

The demographic changes and economic stress that have affected the Great Lakes since 2000 keenly affect many of these communities, reducing their vitality and straining the ability of their local governments, nonprofits, churches, and schools to keep up with functions that serve not only their own residents but people throughout their county. About half of county seats lost population between 2000 and 2013 (figure 24).³¹

Rockford, the county seat of Winnebago County, is one of the county seats that lost population.

The report also notes:

Although Urban Institute projections show growth in other states of about 58.6 million people (22.0 percent) from 2015 to 2040, we expect the Great Lakes to grow by about 3.2 million, or 6.1 percent (figure 15). The growth of the Great Lakes will slow considerably from 2030 to 2040 and under some scenarios could turn negative.³²

³⁰ “Net Undercount and Undercount Rate for Counties,” Illinois, United States Census Bureau, <https://www.census.gov/dmd/www/pdf/underil.pdf>.

³¹ Pendall, Rolf, Poethig, Erika, Treskon, Mark, and Blumenthal, Emily. *The Future of the Great Lakes Region*. Urban Institute. March 2017. Pg. 33. https://www.urban.org/research/publication/future-great-lakes-region/view/full_report.

³² Ibid., pg. 20.

Population will also be sustained if the region can retain people who already live in the Great Lakes and who arrive from abroad.³³

This information is useful when considering future staffing needs.

Based on the estimated 2017 Winnebago County population and 2017 call and incident statistics, the average number of incoming calls per person is 1.40. The average number of law enforcement incidents per person is 1.15, while the average number of fire/EMS incidents per person is 0.15. This information is used with projected population data to determine the potential growth that a consolidated PSAP in Winnebago County could realize.

The Urban Institute report projects a 6.1 percent growth over 25 years, which is slow growth, but growth nonetheless. This leads one to believe that in five years' time, growth in Winnebago County will be minimal. A 2 percent growth rate would have the County's population at approximately 290,474, less than the 2010 Census figures. Growth of 4 percent would have the County's population at approximately 296,169.

Based on 2 percent population growth, incoming call volume could reach 407,000 (rounded to the nearest thousand); of these 189,000 could be 911 calls. Law enforcement incidents could reach 334,000 (rounded); fire/EMS incidents could reach 44,000 (rounded).

The recommended operational configuration for a full consolidation, shown below, regardless of oversight entity, should be able to absorb the increases in call and incident volumes without the need to staff additional workstations.

- Day Shifts – 22 staff each
 - 1 supervisor
 - 1 assistant supervisor
 - 20 telecommunicators
- Night Shifts – 20 staff each
 - 1 supervisor
 - 1 assistant supervisor
 - 18 telecommunicators

The initial staffing complement of 76 telecommunicators and eight supervisors, increasing supervisory staff to 12 over the long-term, will allow four to five call-taker positions to be consistently staffed each shift. This configuration also provides for five law enforcement dispatch positions and three fire/EMS dispatch/tactical positions. If 911 call volumes rise, then consideration would need to be given to an additional call-taker position to meet national standards.

While looking forward five years does present challenges, attempting to predict staffing needs 10 to 20 years into the future is next to impossible, particularly given the migration to NG911. There are too many unknowns. What is certain is that today's 911 operational environment longer will be the same. "Calls," whether voice or data-infused or a Skype-type, likely will take longer to process in the future. Requirements

³³ Ibid., pg. 21.

of first responders also will evolve. While the telecommunicator position as we know it today might change, how is still unknown, though a similar-type position and responsibility seems likely.

It is possible that PSAPs may experience a decrease in call and incident volumes due to the various forms of data that could be presented to a telecommunicator and the form of presentation. Technology may develop that allows sensory devices to input data directly into a CAD incident, bypassing a call-taker altogether. Citizens may be able to access incident systems to report events without speaking to a call-taker. 911 personnel may be able to telework, operating from virtual PSAPs. The opportunities far exceed the 911 community as we know it.

One thing is certain, the types of media that may be presented to a PSAP undoubtedly will affect staff in ways not realized by just hearing an event. PSAPs must consider such impacts to staff when making decisions for the future.

6 Governance Considerations

6.1 Background

Governance is often a top concern for project stakeholders. Because a PSAP consolidation or other reconfiguration of operations often changes organizational and reporting structures, employees, supervisors, administrators and elected officials are all justifiably concerned as to whether they will have an appropriate opportunity to be engaged in the governance of the consolidated or reconfigured center. Stakeholders need to know that their concerns will be heard and addressed and that their questions will be answered by the new organization. MCP recognizes that fair and impartial governance between the ETSB, PSAPs and stakeholders is paramount to a successful consolidation. Regardless of the option chosen, MCP recommends that the ETSB focus on enhancing governance among all stakeholders.

Several municipalities have urged the ETSB to study opportunities for more effective communication services to improve 911 call-handling and dispatch throughout Winnebago County and to propose the most effective governance structure to carry out the optimal configuration. Multiple models were proposed for analysis. This section will review the six proposed models, and variations of them, to identify industry standard best practices regarding governance that will provide the most successful outcomes and improved services for Winnebago County.

6.2 Operational Definition of Governance

To establish a mutual understanding of what is meant by effective and efficient governance, we must first establish the characteristics that contribute to “good” governance. Once established, those elements can be used as part of the evaluation criteria to determine optimal governance structures for the County.

Good governance has several major characteristics.³⁴ These characteristics define how governance should be formed, what features should be considered essential and how to achieve that vision in the governance framework. Generally, governance should be participatory, consensus oriented, accountable, transparent, responsive, effective and efficient, equitable and inclusive, and should follow the rule of law. Good governance is responsive to its stakeholders, and the needs of the organization, exercises vision in policy-setting and decision-making, and ensures the best interests of all stakeholders are considered.

Table 28: Characteristics of Good Governance

Characteristics of Good Governance	
Follows the Rule of Law	Good governance requires fair legal frameworks that are enforced by an impartial regulatory body, for the full consideration of stakeholders.
Transparency	Transparency means that information should be provided in easily understandable forms and media; that it should be freely available and directly accessible to those who will be affected by governance policies and practices, as well as the resulting outcomes of their governance action; and that any decisions made or enforced comply with agreed-upon rules and regulations of the governing body.
Responsive	Good governance expects that organizations and the processes followed are designed to serve the best interests of the stakeholders.
Consensus Oriented	Good governance seeks to understand the different interests of stakeholders to reach a broad consensus of what is in the best interest of the entire stakeholder group and how decisions and policy can sustainable and practical.
Equal and Inclusive	The organization that provides the opportunity for its stakeholders to maintain, enhance, or generally improve their contribution to their destiny provides the most compelling reason for existence and value to the community of interest. Including all significant stakeholders in the process of governance creates the most effective organization.
Effective and Efficient	Good governance meets the needs of its stakeholders. This means that the processes implemented by the organization to achieve successful results address the requirements of its

³⁴ <http://www.governancepro.com/news/>

Characteristics of Good Governance	
	stakeholders, while making the best use of resources — human, technological, and financial.
Accountable	Accountability is a key principle of good governance. Accountability should be documented in policy and clarified in roles and responsibilities. Generally, an accountable organization is one that is responsible to those who will be affected by its decisions or actions.
Participation	Inclusive participation, either directly or through representation, is a key cornerstone of good governance. Participation needs to be informed and organized, including the ability and encouragement to freely contribute concern for the best interests of the entire organization and the 911 community in general.

Good governance is an ideal that is often difficult to achieve. The governmental process characteristically involves well-intentioned people who bring their ideas, experiences, preferences and other strengths (and sometimes shortcomings) to the policy-making table. Good governance is achieved through an ongoing discourse that attempts to capture all considerations involved in assuring that stakeholder interests are reasonably addressed and reflected in policy.

6.3 Evaluation Criteria

Each option contains a brief overview statement of the option, including call-taking and dispatching for the three primary disciplines of law enforcement, fire and EMS. They also will include a list of identified benefits and consequences of the option and other considerations. Other considerations might be legal, operational, labor relations issues, continuity of operations considerations or other factors. Wherever possible, industry standards or best practices will be noted to support the assessment.

6.4 Options Assessment

The ETSB has outlined six configuration scenarios, plus an optional scenario, for consideration in this evaluation. The options have been described at a high-level in an effort keep the assessment uncomplicated. Generally, they focus around three base models:

Host Agency with Contracted Services (as in the City and County full governance options)

Table 29: Host Agency with Contracted Services

Strengths and Opportunities	Challenges and Risks
<p>The host agency provides leadership and management from within its current staff, thereby eliminating the time and new funding needed to hire additional leadership staff.</p>	<p>During any consolidation, there is a concern associated with the loss of direct control over PSAP personnel and dispatch services.</p>
<p>The host agency has established administrative, operational, and technical resources within the county/municipal/public safety entity structure. Examples include human resources, training, facilities maintenance, and network support.</p>	<p>A perception can exist that the host agency does not view the needs of the contracting agency with the same importance, and that the contracting agency receives a lesser level of service than the host agency.</p>
<p>Buy-in for consolidation may be better received when the suggested host PSAP already is dispatching for the disciplines served by the contracting agencies. Buy-in can be enhanced further when the contracting agency also is housed within the same type of agency (e.g., police department to police department rather than fire department to police department or even police department to sheriff's office).</p>	<p>Although the current political environment may be conducive to a contract arrangement, changes in leadership and political agendas over time can create challenges regarding oversight and service level expectations. Such an environment can strain relationships and exacerbate existing stressors. To mitigate this risk for all parties, a detailed governance document is required to protect all parties.</p>
	<p>A need exists to mitigate the challenges of custom/one-off contracts with individual participating agencies, as they become part of the host agency.</p>

Partnership Agreement with Advisory Board

Table 30: Partnership agreement with Advisory Board

Strengths and Opportunities	Challenges and Risks
<p>PSAP management has a clear reporting structure within the host agency.</p>	<p>During any consolidation, there is a concern associated with the loss of direct control over PSAP personnel and dispatch services. This challenge can be mitigated by strong, positive communications between the advisory board and the PSAP director.</p>

<p>The hosting PSAP has established administrative, operational, and technical resources within the county/municipal/public safety entity structure. Examples include human resources, training, facilities maintenance, and network support.</p>	<p>Leadership personnel will require technical and operational skills specific to the PSAP environment. Without adequate succession planning, turnover in leadership positions can create a significant risk.</p>
<p>This model includes an advisory board comprised of public safety officials concerned with the day-to-day operations of the PSAP. The advisory board can include municipal and community representatives, if desired. This board has advisory input only.</p>	<p>Even though the board is only advisory in nature, the risk still exists that the PSAP can be impacted by political agendas and changes in direction that result from a lack of participation and turnover in the advisory board.</p>
<p>The PSAP director has the support and advice of an advisory board to remove roadblocks and champion efforts. The advisory board also can assist with complaints and disputes arising from quality assurance and can make quality improvement recommendations.</p>	
<p>This structure mitigates the risks and challenges associated with one-to-one contracts with individual participating agencies, as they become part of the consolidated organization.</p>	
<p>This model provides the opportunity to formalize governance documents and pricing structures that are predictive and equitable with future participating agencies. For existing contracts, the opportunity exists to renegotiate or amend the contracts to bring them into the new structure.</p>	

6.4.1 Rockford Full Governance

This option considers the full consolidation of 911 call-taking and law enforcement and fire/EMS dispatch under governance of the City. All disciplines serviced would be dispatched from the City PSAP.

6.4.1.1 Governance Structure and Consideration

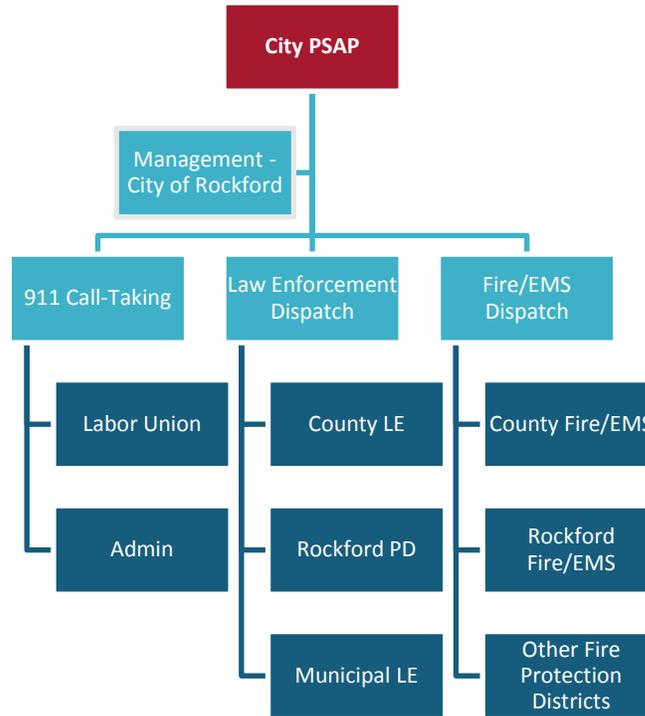


Figure 2: Consolidation Under Rockford Governance Structure

Centralizing governance, management and operations in a single agency presents numerous considerations. In this governance structure, the City becomes the authority and decision-maker. All policy development resides with the City. If this option is considered, the City should establish an advisory committee to ensure that agencies have input into the PSAP's operation. However, response to requests or input from user agencies and other entities, such as the WCSO or municipalities, ultimately is at the City's discretion.

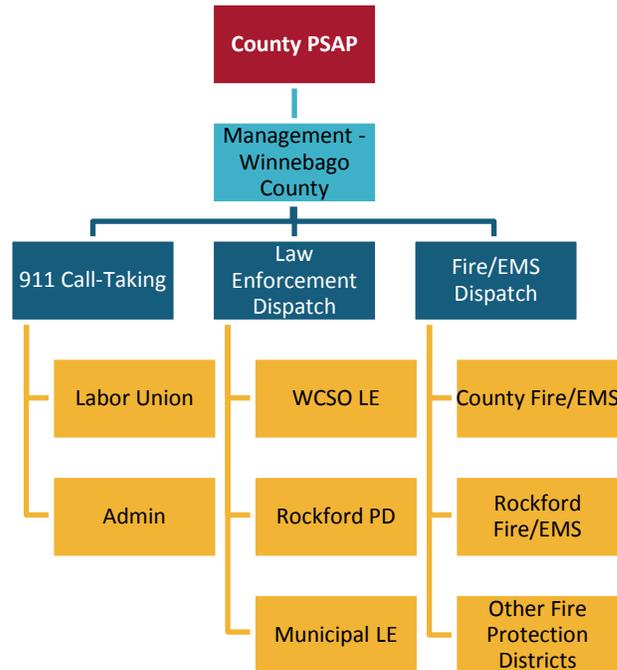
6.4.1.2 Summary Evaluation/Assessment

While this option consolidates both call-taking and dispatch services for all of Winnebago County, stakeholder engagement is not inclusive and decision-making and policy authority resides with only one agency (the Rockford Fire Department). This option might be viable with more shared governance participation by the key stakeholders through an advisory board mechanism or some other jointly agreed-upon structure.

6.4.2 County Full Governance

This option considers the full consolidation of 911 call-taking and law enforcement and fire/EMS dispatch under the governance of Winnebago County.

6.4.2.1 Governance Structure and Considerations



Centralizing operations, and therefore management and governance, in one entity has both positives and negatives as noted above. In this governance structure, the County becomes the decision-maker. All authority and policy development reside with the County. If this option is considered, Winnebago County should establish an advisory committee to ensure that agencies have input into the operation. However, response to requests or input from user agencies and entities, such as the WCSO or municipalities, ultimately is at the County’s discretion.

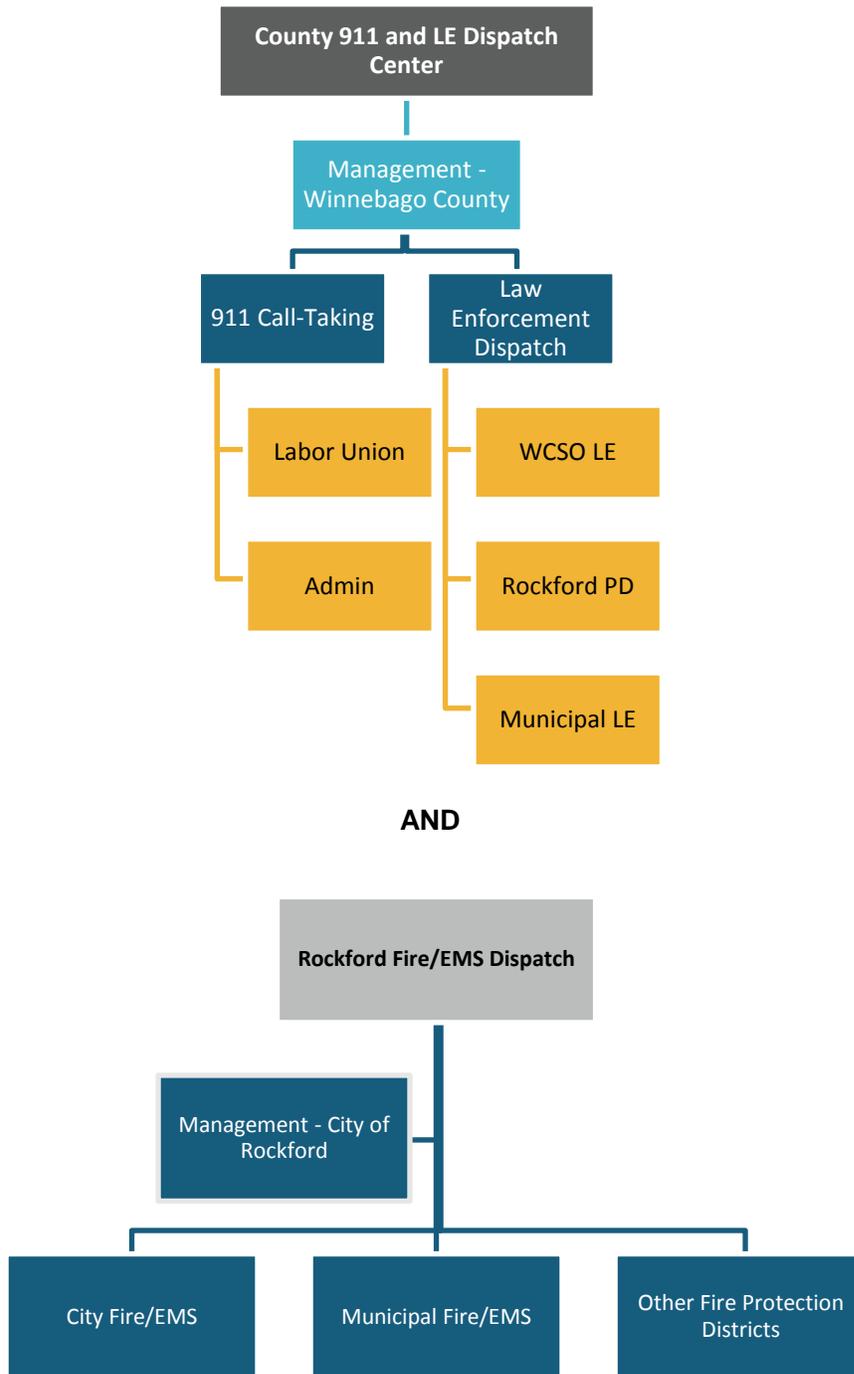
6.4.2.2 Summary Evaluation/Assessment

While this option consolidates both call-taking and dispatch services for all of Winnebago County, stakeholder engagement is not inclusive and decision-making and policy authority resides with only one agency (WCSO). This option might be viable with more shared governance participation by the key stakeholders through an advisory board mechanism or some other jointly agreed-upon structure. This option would be more viable if the governance was formed under an intergovernmental entity created by the municipalities.

6.4.3 County Law Enforcement – Rockford Fire/EMS

This option considers the consolidation of City fire/EMS dispatch, and the consolidation of all law enforcement call-taking and dispatch under the governance of the County.

6.4.3.1 Governance Structure and Considerations



In this governance structure, 911 call-taking and law enforcement dispatch is separate from fire/EMS dispatch. This bifurcated handling of 911 call-processing introduces delays and potential for interruption in transmissions and data flow as transfers occur between the County PSAP and the dispatch for fire/EMS. Any delays in 911 call-processing should be mitigated as much as possible.

6.4.3.2 Summary Evaluation/Assessment

This option, which consolidates call-taking and law enforcement dispatch still does not share governance nor provide for any stakeholder engagement in policy- or decision-making. The option separates fire/EMS dispatch from law enforcement dispatch, making it difficult to coordinate events requiring the response of multiple agencies. Even if this option is selected, a more streamlined and seamless transmission of notification to fire or EMS for dispatch will need to be implemented to ensure quality service and protect against failures or errors. Technology should be employed to transfer calls for dispatch electronically and with call data to assist the dispatchers. Verbal relay of call information with no ability to speak directly with the caller is a concern to be addressed.

Separate Entity as a Regional PSAP

Table 31: Separate Entity as a Regional PSAP

Strengths and Opportunities	Challenges and Risks
<p>The independent organization provides the director with the opportunity to provide equitable service to all participating agencies by best managing PSAP resources. This can mitigate the perception that the host agency is biased concerning the participating agencies.</p>	<p>During any consolidation, there is a concern associated with the loss of direct control over PSAP personnel and dispatch services.</p>
<p>This model creates a deeper career path for PSAP staff.</p>	<p>A carefully drafted governance document is critical to avoid a convoluted reporting structure. It is important that a clear chain of command exists so that the director can effectively manage the PSAP.</p>
<p>As an independent entity with its own budget, there is total organization and mitigation of competing resources.</p>	<p>Although the current political environment may be conducive to this model, changes in leadership and political agendas over time can create challenges regarding oversight and service level expectations. This environment can strain relationships and exacerbate existing stressors. To mitigate this risk for all parties, a detailed governance document is required to protect all parties.</p>

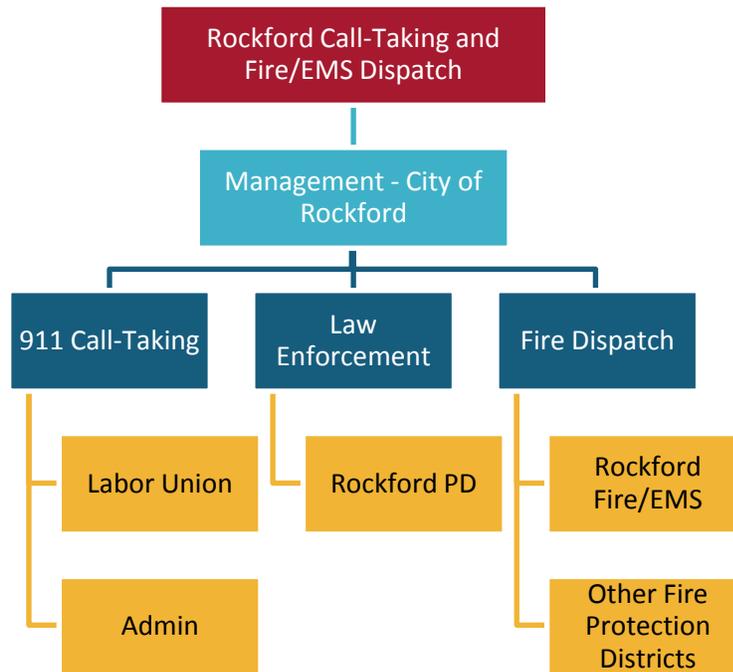
Strengths and Opportunities	Challenges and Risks
<p>This model provides the opportunity to develop a standardized governance agreement that promotes equality in operational and pricing structures for existing and future agencies participating in the consolidation.</p>	<p>There is a risk that participating agencies currently under a contract agreement, such as the New Milford or South Beloit fire departments, would not want to cancel their current contract in favor of the new governance agreement.</p>
	<p>As a completely separate entity, real and intangible costs for administrative, operational, and technical resources—such as human resources, training, facilities maintenance, and network support and facilities—may be perceived to be higher. Funding can be a significant risk if any participating agency moves to deconsolidate.</p>
	<p>Leadership personnel will require technical and operational skills specific to the PSAP environment. Without adequate succession planning, turnover in leadership positions can be create a significant risk.</p>

6.4.4 Rockford and Alternate #1

This option considers the Rockford 911 call-taking, and law enforcement and fire/EMS dispatch, to be handled under the governance of the City. County and municipal (non-Rockford) law enforcement dispatch would be handled under the governance of an alternate PSAP created by the municipalities.

In this configuration, municipalities would establish and govern their own PSAP in place of the County PSAP. In this model all law enforcement dispatch also would be under the governance of an alternate PSAP with policy- and decision-making by a body jointly formed by the County, City and municipalities. As part of this alternative, fire/EMS also would fall under the auspices of the alternate PSAP.

6.4.4.1 Governance Structure and Considerations



In this governance model, all call-taking is centered in a City PSAP, as well as fire/EMS dispatch for all Winnebago County agencies. However, the question of how law enforcement is to be dispatched can be considered in two different scenarios. One creates a dispatch operation for all law enforcement to be governed by a separate governance structure created by the municipalities and the County. The other would continue to have the City PSAP dispatch for the Rockford police department.

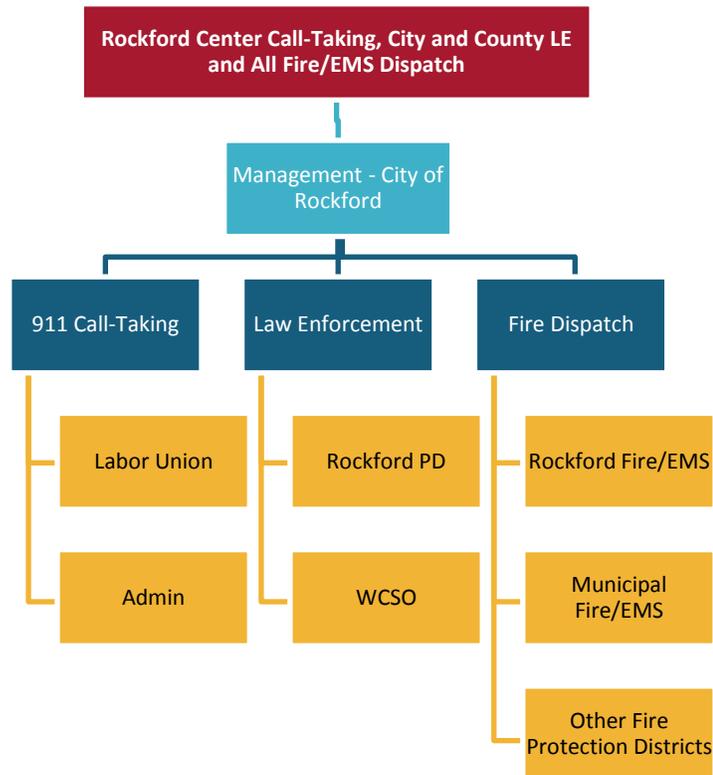
6.4.4.2 Summary Evaluation/Assessment

Horizontal dispatching—the practice of dividing call-taking and dispatching functions—is a common configuration in PSAPs across the country. Although less common and not considered optimal, some PSAPs even divide the call-taking and dispatch functions in different facilities. Even if the dispatching is done out of the same facility, reporting, job level, and authority structures can be different. If call-taking is going to be separated from dispatch, virtually or physically, the parties need to assure that there is cohesive and consistent application of policies. When a call-taking operation is governed one way and a dispatch operation is governed by an entirely different entity, there is concern that policies and operational practices will not align. To ensure that does not happen in Winnebago County, the two management authorities will need to ensure a high level of coordination and collaboration.

6.4.5 Rockford and Alternate #2

Under this option, the City and County law enforcement and fire/EMS dispatch would be under the governance authority of the City, along with all call-taking services. Municipal law enforcement (outside of Rockford) would fall under the governance of an alternate PSAP created by the municipalities.

6.4.5.1 Governance Structure and Considerations



AND



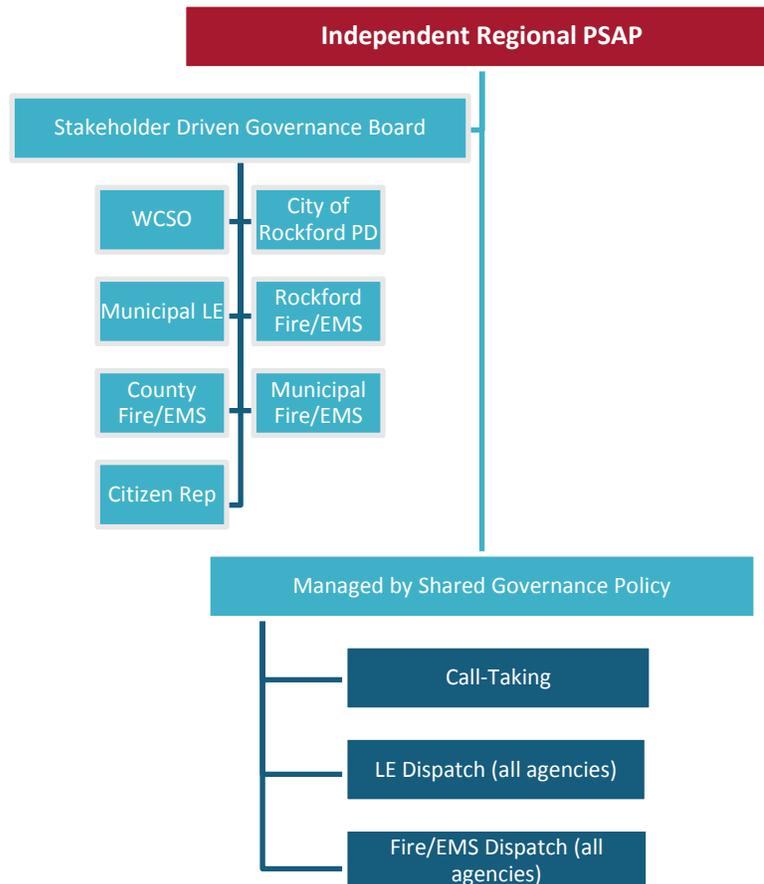
6.4.5.2 Summary Evaluation/Assessment

This option offers centralized call-taking and fire/EMS dispatch services, but splits law enforcement dispatching for municipalities into a separate operation. This creates additional, less efficient and inconsistent processes for law enforcement, although the municipalities would have greater control over their law enforcement policy- and decision-making. Governance and decision-making for other law enforcement in the remainder of the county and city is not shared. New facilities, policy, administrative structure and staffing will have to be considered, to name but a few of the key considerations for the newly formed municipal law enforcement dispatch operation.

6.4.6 Independent Fully Consolidated Regional PSAP

This option is a full regional collaborative effort either as a new consolidated PSAP governed by a stakeholder-driven board or by outsourcing of service.

6.4.6.1 Governance Structure and Considerations



Governance is shared in a newly formed board with representation from all stakeholder groups. Policy is driven by collaborative decision-making that considers all disciplines as well as the overall effectiveness of the communications center. MCP recommends that any governance board be comprised of individuals who can best represent their jurisdictions while helping the board to accomplish the best practices outlined in Table 28: Characteristics of Good Governance.

6.4.6.2 Summary Evaluation/Assessment

The fully consolidated option, with shared governance, addresses most of the needs and desires of the stakeholders involved as we understand them, and offers the greatest opportunity for effective and efficient operations. The desire of the Winnebago County ETSB is to provide the best quality of service for the citizens and visitors of the county. This includes reducing or eliminating call transfers, which is best accomplished with one consolidated center.

7 Financial Considerations

7.1 General Financial Considerations

To identify an estimated cost of each potential model, MCP considered staffing, operational and systemization expenses.

Staffing expenses are based on MCP's projection of staffing needs based on national standards. We combined the staffing needs with the current collective bargaining agreements likely to carry over to each model's proposed governance structure. The Illinois Department of Employment Security median rate of \$22.87 per hour, for "43-5031 – Police, Fire and Ambulance Dispatchers" was utilized in the projections for consolidated models that require the hiring of new staff. Because the need to obtain salary and benefit information varied based on the options and available data, MCP has indicated the source of the personnel costs identified in the description in each option's summary table.

Operational expenses are based on MCP's understanding of the current environment as well as the likely situation that the model's governance structure would present.

Systemization costs include the necessary systems for the operation of a communications center. Prior to the start-up of a new or reorganized center, decisions are made regarding what will come with the center operations to the new location and what will be provided new. Some systems are necessary, such as the phone lines/trunks used for 911 call delivery and transfers to surrounding agencies. These lines very well may need duplication to allow for a smooth transition from one facility to the other. Once the transition has been completed and the system has been up and running, the duplicate lines then can be eliminated. It is MCP's opinion that the ETSB is in an opportune time frame to implement any proposed change regarding technology. The NINGA CHE and CAD projects are pre-deployment and present the opportunity to locate technology in the locations that the ETSB and its stakeholders choose based on the findings of this report.

For this reason, MCP only will reference ETSB-funded costs for technology, such as CAD and CHE, where they will be impacted by the consolidation option being evaluated.

Once an estimate of expenses was developed for each option, MCP also compared it to the baseline cost. These findings are outlined in each option's assessment.

7.2 Potential Funding Models

Identifying a funding method for a shared services communications center is a complicated task. A key goal should be the fair and equitable funding of services—particularly relating to call dispatch—across all member jurisdictions. One of the key findings relating to funding of 911 service in Winnebago County is that it is currently not a shared burden.

The method selected should provide a level of predictability and fairness upon which all member jurisdictions can agree. MCP has identified several funding models currently utilized by other collocated and consolidated communication centers.

Population Basis

The population-based cost-allocation model involves assessing a share of operational costs based upon the population within each jurisdiction. Using this method, member jurisdictions would be assessed a portion of the operational cost on a per-capita basis. The projected operating budget is divided by the total population to determine an average-per-person assessment. While several adaptations of a population-based model are possible, MCP recognizes that this model may be more suitable in areas where population data and response agencies are defined clearly by municipal boundaries.

Activity Volume

Cost assessment based upon activity is a common method that is used to fund shared service communications centers. Routine communications center activities may be tracked and documented including:

- Incoming 911 calls
- Incoming 911 and seven-digit calls
- Calls dispatched
- Field-originated calls
- Radio transmissions

Activity-based costs can be derived using two methods. The first involves tracking the activity volume associated with each member agency. The entity is assessed the cost of provisioning specific services based upon actual use. The second method involves averaging the volume of an activity across all participating jurisdictions or agencies. As an example, PSAPs would document the number of 911 calls received annually. The annual operating budget can be divided by the number of 911 calls to derive a per-

call cost. Each entity then would contribute a share of the cost based upon the average of overall system usage.

Maintenance of Effort

In this model, each agency contributes an equal portion of the operating budget based upon the straight division of the total costs among all member agencies. Though rarely used as a standalone model, this model is the most simplistic in terms of cost distribution. The governing entity must determine the basis of the cost allocation, similar to the activity-based method. MCP does not recommend this model as it does not fairly distribute the costs amongst the agencies.

Ad Valorem Basis

This method uses the tax valuation of properties located within each jurisdiction as the basis to determine the level of contribution. In Illinois, this likely would be done utilizing the equalized assessed value (EAV), which is the application of state's equalization factor to the assessed value of a parcel of property. Tax bills are calculated by multiplying the EAV (after any deductions for homesteads) by the tax rate. This method fails to account for the taxing overlay of the EMS and municipal jurisdictions. Additionally, some municipalities do not levy a tax on the EAV and subsequently would not have a revenue source to contribute without a push for a local legislative change.

Also, an ad valorem basis model would not accurately account for activity in the case of a distressed municipality. If there is an area that has a higher than normal call volume due to higher crime or an increased workday population, it may not necessarily be reflected in property values. It is possible in this case to have a suburban bedroom community with higher property values, yet less of a demand for service, paying more than another municipality that has a higher demand for service.

Resource Basis

This method is based upon the number of public safety resources (e.g., personnel, apparatus, stations) that each member agency possesses. This method is based upon the assumption that resources are closely aligned with activity and demands on the communications system. A similar method based on the number of sworn officers was proposed by the City to the other municipalities prior to the commissioning of this study.

Hybrid Basis

Any of the methods that have been described so far could be combined, either by discipline (law, fire or EMS) or by jurisdiction if it is advantageous to the governance body. For instance, St. Clair County, Illinois, utilizes a hybrid of the Activity (call volume) method, but also separates LEADS³⁵ access charges and

³⁵ Law Enforcement Automated Data System.

divides them amongst the law enforcement entities (Maintenance of Effort). DU-COMM,³⁶ in DuPage County, Illinois, uses a three-phased approach. It has a funding formula that takes into account several factors and divides the funding needs first by discipline (fire or EMS). Then, it utilizes the Ad Valorem Basis method for fire protection districts and uses the Resource Basis method for law enforcement agencies.

Probably the most relevant factor that should be studied regarding DU-COMM is that it has organized a funding formula committee that serves under the governance body. This ensures stakeholder input into the development and modification of the formula. In fact, it could be argued that the most important aspect of shared governance is development of the funding formula. MCP will provide some *estimated* impacts of the various models on the recommended options later in this report. However, MCP's recommendation is that any selected funding option undergoes a more intensive financial analysis focused on the development of a fair and equitable cost-sharing model. The selected financial model also should attempt to solicit input from as many stakeholders as possible, especially if they are being asked to share the burden.

With the delivery of this report, MCP is providing to the ETSB a spreadsheet that can be used to apply the various models described in this section using the variables that likely will change. This will enable the ETSB and its stakeholders to evaluate all models to determine which one will most adequately and fairly fund the governance model selected.

Below is an example of the output of the spreadsheet, in which the "target amount" to be shared was \$8,553,449 (the average of total PSAP costs of all options outlined in this report).

³⁶ DuPage Public Safety Communications.

Mission Critical Partners
Cost Sharing Model Calculator



Target Amount		\$8,553,449	Model					Per Call Rate	\$ 30.00	Per Call Revenue Generated				\$ 11,111,760		
Agency Type	Agency	Currently Paying	Population Estimate to Target	Activity Volume		Maint of Effort	Ad Valorem	Resource			Data Entry Columns					
				Fee of \$30.00 per call	Call Volume to Target - \$23.09 rate	Total # of Agencies (30)	0.001055 rate increase	Resource - Police	Resource - Fire	Resource - All	Population	Call Volume	Police Resources	Fire Resources	EAV	
Fire	Blackhawk FD	\$ 13,710	\$ -	\$ 13,710	\$ 10,553	\$ 285,114.97	\$ 40,689		\$ -	\$ -			457			\$ 38,551,162
Fire	Cherry Valley FD	\$ 62,880	\$ 92,641	\$ 62,880	\$ 48,403	\$ 285,114.97	\$ 321,807		\$ -	\$ -		3,129	2,096			\$ 304,896,345
Fire	Durand FD	\$ 11,479	\$ 38,934	\$ 8,670	\$ 6,674	\$ 285,114.97	\$ 102,411		\$ -	\$ -		1,315	289			\$ 97,029,942
Fire	Harlem-Roscoe FD	\$ 122,000	\$ -	\$ 92,310	\$ 71,057	\$ 285,114.97	\$ -		\$ -	\$ -			3,077			
Fire	Loves Park FD	\$ 25,850	\$ -	\$ 75,000	\$ 57,732	\$ 285,114.97	\$ 681,554		\$ -	\$ -			2,500			\$ 645,739,598
Fire	New Milford FD	\$ 21,420	\$ -	\$ 21,420	\$ 16,488	\$ 285,114.97	\$ 41,071		\$ -	\$ -			714			\$ 38,912,828
Fire	North Park FD	\$ 18,973	\$ -	\$ 43,260	\$ 33,300	\$ 285,114.97	\$ 169,842		\$ -	\$ -			1,442			\$ 160,917,503
Fire	Northwest FD	\$ 156,990	\$ -	\$ 15,600	\$ 12,008	\$ 285,114.97	\$ 57,862		\$ -	\$ -			520			\$ 54,821,725
Fire	Pecatonica FD	\$ 11,752	\$ 68,541	\$ 9,930	\$ 7,644	\$ 285,114.97	\$ 105,446		\$ -	\$ -		2,315	331			\$ 99,904,651
Fire	Rockford FD	\$ 1,378,779	\$ -	\$ 865,050	\$ 665,886	\$ 285,114.97	\$ -		\$ -	\$ -			28,835			
Fire	Rockton FD	\$ 6,913	\$ 224,898	\$ 25,350	\$ 19,514	\$ 285,114.97	\$ 223,596		\$ -	\$ -		7,596	845			\$ 211,846,363
Fire	Shirland FD	\$ 10,101	\$ -	\$ 2,310	\$ 1,778	\$ 285,114.97	\$ 8,610		\$ -	\$ -			77			\$ 8,157,126
Fire	South Beloit FD	\$ 25,215	\$ 224,690	\$ 33,000	\$ 25,402	\$ 285,114.97	\$ -		\$ -	\$ -		7,589	1,100			
Fire	West Suburban FD	\$ 18,960	\$ -	\$ 18,960	\$ 14,595	\$ 285,114.97	\$ 22,671		\$ -	\$ -			632			\$ 21,479,374
Fire	Win-Bur-Sew FD	\$ 9,633	\$ -	\$ 14,790	\$ 11,385	\$ 285,114.97	\$ 119,705		\$ -	\$ -			493			\$ 113,414,892
Police	Cherry Valley PD		\$ -	\$ 173,280	\$ 133,385	\$ 285,114.97	\$ 82,189	\$ 486,782		\$ 486,782			5,776	14	16	\$ 77,870,286
Police	Durand PD		\$ -	\$ 26,400	\$ 20,322	\$ 285,114.97	\$ 16,945	\$ 34,770		\$ 34,770			880	1	3	\$ 16,054,744
Police	Loves Park PD	\$ 132,600	\$ 725,351	\$ 822,990	\$ 633,509	\$ 285,114.97	\$ 369,950	\$ 1,182,184		\$ 1,182,184		24,499	27,433	34	34	\$ 350,509,856
Police	Machesney Park PD	\$ 160,300	\$ 681,029	\$ 714,840	\$ 550,259	\$ 285,114.97	\$ 327,296	\$ -		\$ -		23,002	23,828	0	24	\$ 310,097,479
Police	Pecatonica PD		\$ -	\$ 32,640	\$ 25,125	\$ 285,114.97	\$ 27,458	\$ 69,540		\$ 69,540			1,088	2	6.5	\$ 26,014,878
Police	Rock Valley College PD		\$ -	\$ 1,950	\$ 1,501	\$ 285,114.97	\$ -	\$ -		\$ -			65	0	5.6	
Police	Rockford Park District PD		\$ -	\$ 106,800	\$ 82,211	\$ 285,114.97	\$ -	\$ 312,931		\$ 312,931			3,560	9	16	
Police	Rockford PD	\$ 3,488,264	\$ 4,429,173	\$ 4,847,160	\$ 3,731,176	\$ 285,114.97	\$ 1,503,761	\$ -		\$ -		149,597	161,572	0	296	\$ 1,424,741,981
Police	Rockton PD		\$ -	\$ 223,560	\$ 172,089	\$ 285,114.97	\$ 152,733	\$ 556,322		\$ 556,322			7,452	16	17.5	\$ 144,707,651
Police	Roscoe PD		\$ 315,792	\$ 253,560	\$ 195,182	\$ 285,114.97	\$ 210,223	\$ 452,012		\$ 452,012		10,666	8,452	13	14	\$ 199,176,067
Police	South Beloit PD		\$ -	\$ 171,990	\$ 132,392	\$ 285,114.97	\$ 112,078	\$ 486,782		\$ 486,782			5,733	14	14	\$ 106,188,364
Police	Winnebago (City) PD		\$ 89,059	\$ 71,670	\$ 55,169	\$ 285,114.97	\$ 46,846	\$ 208,621		\$ 208,621		3,008	2,389	6	8	\$ 44,384,130
Police	Winnebago County SO	\$ 1,979,097	\$ 1,663,342	\$ 2,111,790	\$ 1,625,583	\$ 285,114.97	\$ 3,808,706	\$ 4,763,506		\$ 4,763,506		56,180	70,393	137	129	\$ 3,608,566,720
Other	Winnebago Animal Services	\$ 150,387	\$ -	\$ 160,470	\$ 123,524	\$ 285,114.97	\$ -	\$ -		\$ -			5,349	0		
Other	Winnebago Coroner's Office	\$ 84,739	\$ -	\$ 90,420	\$ 69,602	\$ 285,114.97	\$ -	\$ -		\$ -			3,014	0		
Total Generated		\$ 7,890,040	\$ 8,553,449	\$ 11,111,760	\$ 8,553,449	\$ 8,553,449	\$ 8,553,449	\$ 8,553,449	\$ -	\$ 8,553,449		288,896	370,392	246	583.6	\$ 8,103,983,665

Another area that should be considered, regardless of the funding option, is the share of ETSB-received surcharge funding that is applied to the selected option. Currently, although the IGA is expired, the ETSB provides approximately \$564,000 per year to the City PSAP for a calculated share of call-taking expenses. The IGA also stipulates that the PSAP director, and the MSAG and training coordinators, are funded by the ETSB at 50 percent. In 2018, this will account for \$228,833 in ETSB reimbursements to Rockford for these positions.

- Once an option is selected, a more intensive financial analysis should be performed to determine a percentage of surcharge funding that the ETSB is comfortable providing to the option’s PSAP(s) for call-taking services. Based on the information available, MCP was not able to determine what percentage of a dispatcher’s time is spent on non-emergency/administrative dispatch functions.
- In the case where multiple PSAPs are involved, MCP has recommended a countywide 911 director, and MSAG, training and technical services that are under the ETSB’s direct control.

7.3 Rockford Full Governance

Rockford Full Governance – Cost Projection 1st Year	
	City PSAP
Personnel Costs: Including telecommunicator, administrative and management salaries, overtime and benefits. Using both Rockford CBAs. ³⁷	\$8,327,227
Operational Expenses: Non ETSB: Based on current combined budgets of City and County PSAPs	\$244,573
Systemization Costs: Based on \$30,000 budget per fire department for radio system relocation and consolidations, and recorder and reconfiguration at City PSAP	\$252,500
Total Costs	\$8,824,300
Baseline PSAP Costs	\$7,307,834
Difference between Option and Baseline Costs	\$1,516,466
ETSB-Funded Staffing Reimbursements: Call-takers, MSAG coordinator, IT and training personnel	\$704,514
Remaining amount to be funded by stakeholders	\$8,119,786

³⁷ Collective bargaining agreements.

One of the financial challenges this scenario involves the setting of fees. Because Rockford would serve as the fiduciary agent for the PSAP, the City would have the full authority to set the fee. This would involve the selection of the cost model utilized, as well as the setting and authorization of certain expenses. The City also would have the full understanding of the expenses and burden of operating the PSAP.

Rockford already has a model in place with the rural fire departments. In this scenario, MCP recommends that the City solicit input from its stakeholders to set a fee that achieves the needs of the City and is fair and equitable amongst all stakeholders.

7.4 County Full Governance

WCSO Full Governance – Cost Projection 1st Year	
	County PSAP
Personnel Costs: Including telecommunicator, administrative and management salaries, overtime and benefits. Using the Winnebago County CBA.	\$6,190,780
Operational Expenses: Non-ETSB: Based on current combined budgets of the City and County PSAPs.	\$244,573
Systemization Costs: Based on \$30,000 budget per fire department for radio system relocation and consolidations and Central Station alarm relocation.	\$245,000
Total Costs	\$6,680,353
Baseline PSAP Costs	\$7,307,834
Difference Between Option and Baseline Costs	(\$627,481)
ETSB-Funded Staffing Reimbursements: Call-takers, MSAG coordinator, IT and training personnel	\$0.00
Remaining Amount to be Funded by Stakeholders	\$6,680,353

When considering the financial impacts of this option, some of the municipalities that currently are served by the County PSAP for law enforcement dispatch posed the following question: "Assuming Winnebago County has a legal duty to provide 911 services to the municipalities within the county, other than the City of Rockford, does the County have the power to impose a fee or charge the municipalities for such services?"

The full legal brief posed by the municipalities, as well as the opinion rendered by the ETSB counsel, are included in the appendices. This option is certainly the most cost-effective based on the County's current pay structure. An analysis of the two legal opinions does appear to indicate that a fee-for-service model is likely permissible at the County level to help fund dispatch services. This has yet to be tested in a court of law, however, and the lack of governance, as mentioned in Section 6.7, would remain as a detractor to this option.

If this option is selected, MCP recommends that the County solicit input from its stakeholders to set a fee that achieves the needs of the County and is fair and equitable amongst all stakeholders.

7.5 County Law – Rockford Fire/EMS

County Law / Rockford Fire/EMS Governance - Cost Projection 1st Year				
	City PSAP	County PSAP	ETSB Cost	Total
Personnel Costs: Including telecommunicator, administrative and management salaries, overtime and benefits. Rockford CBAs used at City PSAP; WCSO CBAs used at County PSAP; average salaries used for ETSB staff.	\$3,388,439	\$4,294,063	\$272,004	\$7,954,506
Operational Expenses (Non-ETSB): Based on current combined budgets of City and County PSAPs	\$216,108	\$28,465	\$1,366,348	\$1,610,921
Systemization Costs: Based on \$30,000 budget per fire department for radio system relocation and consolidations, recorder reconfiguration at City PSAP, and continued bond payment for ETSB	\$250,000	\$2,500	\$476,250	\$728,750
Total Costs	\$3,854,547	\$4,325,028	\$2,114,602	\$10,294,177
Baseline Cost	\$4,806,768	\$2,278,825	\$1,849,292	\$8,934,885
Difference Between Option and Baseline Costs	(\$952,222)	\$2,046,203	\$265,310	\$1,359,292
ETSB-Funded Staffing Reimbursements: Call-takers	\$704,514	\$0.00	\$704,514	\$0.00
Remaining Amount to be Funded by Stakeholders	\$3,150,033	\$4,325,028	\$2,819,116	\$10,294,177

7.6 Rockford and Alternate #1

Rockford Police and All Fire and EMS and Alternate PSAP #1 – Cost Projection 1st Year				
	City PSAP	Alternate PSAP	ETSB Cost	Total
Personnel Costs: Including telecommunicator, administrative and management salaries, overtime and benefits. Rockford CBAs used at the City PSAP; median IDES ³⁸ wages used for alternate PSAP.	\$6,028,710	\$2,883,035	\$346,012	\$9,257,757
Operational Expenses (Non-ETSB): Based on current budget of City PSAP and estimated budget for alternate PSAP (based on current County PSAP expenses reported)	\$216,108	\$720,759	\$1,366,348	\$2,303,215
Systemization Costs: Based on \$30,000 budget per fire department for radio system relocation and consolidations, recorder reconfiguration at City PSAP, continued bond payment for ETSB	\$250,000	\$2,500	\$476,250	\$728,750
Total Costs	\$6,494,818	\$3,606,294	\$2,188,610	\$12,289,722
Baseline Cost				\$9,157,126
Difference between Option and Baseline Costs				\$3,132,596
ETSB-Funded Staffing Reimbursements: Call-takers	TBD	TBD	\$0.00	\$0.00
Remaining Amount to be Funded by Stakeholders	\$6,494,818	\$3,606,294	\$2,188,610	\$12,289,722

³⁸ Illinois Department of Employment Security.

7.7 Rockford and Alternate #2

Rockford and County Police and All Fire and EMS and Alternate PSAP #2 – Cost Projection 1st Year				
	City PSAP	Alternate PSAP	ETSB Cost	Total
Personnel Costs: Including telecommunicator, administrative and management salaries, overtime and benefits. Rockford CBAs used at City PSAP and median IDES wages used for alternate PSAP.	\$7,434,295	\$1,194,494	\$346,012	\$8,974,801
Operational Expenses (Non-ETSB): Based on current budget of City PSAP and estimated budget for alternate PSAP. (Based on estimated 25% operating expenses of total budget)	\$216,108	\$298,623	\$1,366,348	\$1,881,080
Systemization Costs: Based on \$30,000 budget per fire department for radio system relocation and consolidations, recorder reconfiguration at City PSAP, and continued bond payment for ETSB.	\$250,000	\$2,500	\$476,250	\$728,750
Total Costs	\$7,900,403	\$1,495,617	\$2,188,610	\$11,584,631
Baseline Cost				\$9,157,126
Difference Between Option and Baseline Costs				\$2,427,505
ETSB-Funded Staffing Reimbursements: Call-takers	TBD	TBD	\$0	
Remaining Amount to be Funded by Stakeholders	\$7,900,403	\$1,495,617	\$2,188,610	\$11,584,631

7.8 Fully Consolidated PSAP

Consolidated PSAP – Cost Projection 1st Year	
	Consolidated PSAP
Personnel Costs: Including telecommunicator, administrative and management salaries, overtime and benefits	\$6,577,381
Operational Expenses (Non-ETSB): Based on current combined budgets of City and County PSAPs	\$244,573
Systemization Costs: Based on \$30,000 budget per fire department for radio system relocation and consolidations, and Central Station alarm relocation	\$245,000
Total Costs	\$7,066,954
Baseline PSAP Costs	\$7,307,834
Difference Between Option and Baseline Costs	(\$240,880)
ETSB-Funded Staffing Reimbursements: Call-takers, MSAG coordinator, IT and training personnel	\$0.00
Remaining amount to be funded by stakeholders	\$7,066,954

8 Summary and Recommendations

One question asked in one of the addenda published with the RFP is as follows: "Is consolidation necessary?" MCP has concluded that some level of consolidation can provide benefits, including improved response times as a result of reducing call transfers and, in some instances, cost efficiencies. However, MCP has found that the more prevalent concern in Winnebago County is the lack of process and governance pertinent to 911 services—much more so than a lack of consolidation. A poorly planned consolidation effort will certainly yield less positive results—financially, operationally, politically and technologically—than one that is developed collaboratively. The ETSB, PSAPs, City, County and municipalities should be commended for their forward thinking in seeking multiple independent analyses before setting forth in one particular direction. The technology already in place, along with the planned upgrade to the CAD and 911 telephone systems provides a lot of flexibility in selecting the best options moving forward.

Over the years, there has been a lack of clear direction concerning the operation of the 911 system as a whole. However, until the recent crises have brought the concerns to light, it is easy to understand how this

has been overlooked—both of the PSAPs and the ETSB manage to provide high quality service operationally and technologically. Throughout MCP’s visits, every group of stakeholders indicated they were pleased in these areas with their respective PSAP or RDP. However, the primary areas that need correction—which consolidation eventually may be part of the solution—are those of governance and finances.

As part of the initial discussions surrounding operations, technology governance and financial considerations concerning the ETSB and stakeholders, several guiding principles were noted. These, in addition to the characteristics of good governance outlined previously in this report, will be used as evaluation and assessment tools for the various models proposed for consideration. These guiding principles as articulated by the stakeholders were:

- Ensuring that the quality of 911 service is preserved or improved
- Economical solutions that are fair
- Representation in decision-making that impacts the jurisdiction or discipline

The table below represents MCP’s analysis of the various options in terms of all factors:

Guiding Principle Measurement					
Option	Current Quality of Service Preserved	Quality of Service Improved	Cost Difference in Relation To Baseline	Stakeholder Engagement	Notes
Rockford Full Governance	Yes	Yes	Higher (\$1.5M)	No	Management and oversight under control of Rockford
County Full Governance	Yes	Yes	Less (\$627K)	No	Management and oversight under control of County
County Law / Rockford Fire and EMS	Yes	No appreciable change	Higher (\$1.4M)	No	Management and oversight of LE policy controlled by County; fire/EMS under control of Rockford
Rockford and Alternate #1	Yes	No appreciable change	Higher (\$3.1M)	No	Management and oversight under control of Rockford for City PSAP; under control of municipalities and

Guiding Principle Measurement					
Option	Current Quality of Service Preserved	Quality of Service Improved	Cost Difference in Relation To Baseline	Stakeholder Engagement	Notes
					County for alternate PSAP
Rockford and Alternate #2	Yes	No appreciable change	Higher (\$2.4M)	For LE and Fire/EMS dispatch only	Management and oversight for dispatch policy under control of all three entities; call-taking policy under control of Rockford
Rockford and Alternate PSAP (LE, Fire, EMS)	Yes	No appreciable change	Higher (\$3.2M)	Yes	
Rockford/County and Alternate PSAP	Yes	No appreciable change	Higher (\$2.5M)	Yes	
Fully Consolidated Regional Center	Yes	Yes	Less (\$240K)	Yes	Jointly shared governance by all affected stakeholders

Rockford Full Governance

If all services were consolidated under the City PSAP—under a similar arrangement with the ETSB as is currently in place—MCP’s cost analysis and projection shows an increase over the countywide baseline cost of 911 service of \$1,516,466. This number is close to the estimates developed by the ETSB chairman before the development of the resource-based cost-sharing model.

MCP is confident that the City PSAP could deliver a high level of service to the entire county. Politically, however, the ETSB likely would have difficulty getting other stakeholders in the county to look beyond the lack of governance, aside from that which is advisory in nature. Municipalities will have to weigh their desire for more governance versus the costs associated with this option. Although not a primary recommendation, if this option is chosen MCP recommends that the ETSB and City respond to the considerations outlined in the Technology, Operations/Staffing, Governance and Financial sections of this report specific to this option.

Benefits	Concerns	Other Considerations
<ul style="list-style-type: none"> Centralized call-handling and dispatch; center can have a full situational awareness of incidents within the county and is in a good position to coordinate events requiring more than one discipline Reduced call transfers thus reducing the likelihood of errors Physical facility already exists and may be adapted All infrastructure—such as staffing, training, physical plant, technology, supervision, management, and administration (payroll functions, HR functions)—are already in place Can be moved to County PSAP if determined feasible, or County PSAP may be used as a backup facility 	<ul style="list-style-type: none"> No stakeholder engagement in decision-making or policy development that impacts their agency and operations Combining labor forces with differing pay grades, benefits, and contracts will prove challenging County responders likely will need to get used to new procedures; possibly all responders will need to use new procedures Back up and continuity of operations will be compromised with only one PSAP; a backup facility will be required Further study will be needed to determine whether the existing physical facility is adequate for increased workload and operational needs Additional technology/equipment may be required, with cost impacts Additional staff will need to be incorporated from other existing workgroups or hired 	<ul style="list-style-type: none"> Negotiations with labor unions will be required if workforce consolidation is to be considered and likely will result in a new contract for all telecommunicators. A full human resources impact study is required before proceeding with this option. Backup facilities will need to be planned. Consideration should be given to utilize the County PSAP as a backup facility. If this option is selected, a method for stakeholder input should be developed; however, it is unlikely that the input would be more than at an advisory level.

County Full Governance

If all services were consolidated under the County PSAP—under a similar arrangement with the ETSB as is currently in place—MCP’s cost analysis and projection shows a decrease under the countywide baseline cost of 911 service of \$627,481.

MCP is confident that the County PSAP could deliver a high level of service to the entire county if staffed properly and outfitted with a more robust leadership team. Going forward, however, the ETSB likely would have difficulty getting other stakeholders in the county to look beyond the lack of governance, aside from that which is advisory in nature. Municipalities will have to weigh their desire for increased governance

versus the lower costs associated with this option. In this scenario, the City will have to weigh the same considerations.

The current staffing and fiscal crisis at the County PSAP certainly will raise concerns that, without significant reorganization and recruitment, the County PSAP will have difficulty returning to the levels necessary to function in a consolidated environment. Any efforts by the City to eliminate personnel also will receive significant challenge from the collective bargaining units that represent its employees.

Although not a primary recommendation, if this option is chosen MCP recommends that the ETSB and County respond to the considerations outlined in the Technology, Operations/Staffing, Governance and Financial sections of this report specific to this option.

All options should be considered in relation to the others. All considerations should be weighed as well. For instance, cost should not be the only guiding factor when selecting an option. Through our interviews and discussions with the various stakeholders, most of them indicated that cost, although important, could be accepted if there was adequate governance associated with it.

Benefits	Concerns	Other Considerations
<ul style="list-style-type: none"> • More-seamless call-taking and dispatch functions • Improved call-processing time • Reduced transfers thus reducing the likelihood of errors • All infrastructure—such as staffing, training, physical plant, technology, supervision, management, and administration (payroll functions, HR functions)—are already in place • Rockford PSAP may be used as back up facility • Centralized call handling and dispatch; center can have a full view of entire events and is in a good position to coordinate events requiring more than one discipline • Physical facility already exists and may be adapted • All infrastructures such as staffing, training, physical 	<ul style="list-style-type: none"> • No stakeholder engagement in decision-making or policy development that impacts their agency and operations • Combining labor forces with differing pay grades, benefits, and contracts will prove challenging. The County already is experiencing a staffing and budget crisis within the 911 system. • Backup and continuity of operations will be compromised with only one PSAP; a backup facility will be required • Further study will be needed to determine whether the existing physical facility is adequate for increased workload and operational needs • Additional technology/equipment may be required, 	<ul style="list-style-type: none"> • Negotiations with labor unions will be required if workforce consolidation is to be considered and likely will result in a new contract for all telecommunicators. A full human resources study is required before proceeding with this option. • Backup facilities will need to be planned. Consideration should be given to utilizing the County PSAP as a backup facility. • If this option is selected, a method for stakeholder input should be developed; however, it is unlikely that the input would be more than at an advisory level.

Benefits	Concerns	Other Considerations
plant, technology, supervision, management, administration (payroll functions, HR functions) are already in place <ul style="list-style-type: none"> Trained staff already exists 	or upgrades will require planning and funding <ul style="list-style-type: none"> Additional staff will need to be incorporated from other existing workgroups or hired. A staff assessment will need to be conducted to determine feasibility of incorporating workforce from other existing workgroups, or new hires City and municipal responders likely will need to get used to new procedures; possibly all responder agencies and personnel will need to accommodate new procedures 	

County Law – Rockford Fire/EMS

If all law enforcement services were consolidated under the County PSAP and fire/EMS services were consolidated under the City PSAP—under a similar arrangement with the ETSB as is currently in place—MCP’s cost analysis and projection shows an increase above the countywide baseline cost of 911 service of \$1,359,292.

This option has similar considerations to the previous full governance options—with the addition that each challenge must be addressed twice. There will need to be two different cost-sharing models selected. There will need to be two different advisory boards established.

Benefits	Concerns	Other Considerations
<ul style="list-style-type: none"> Call-taking is centralized Physical facility already exists and may be adapted Call-taking and dispatch for law enforcement is combined into one operation Minimizes transfers to another agency for law enforcement dispatch 	<ul style="list-style-type: none"> No stakeholder engagement from two-thirds of user agencies Services will not reside with a single entity, complicating dispatch Transfers will be required for fire/EMS dispatch, introducing delays 	<ul style="list-style-type: none"> Additional study will be necessary to fully explore this option. Planning for any possible facility adaptations, staffing adjustments, costs and cost distribution—and whether any governance discussions are needed to improve service, establish timelines, or implement

Benefits	Concerns	Other Considerations
<ul style="list-style-type: none"> • Simplifies coordination of law enforcement events • All infrastructure—such as staffing, training, physical plant, technology, supervision, management, and administration (payroll functions, HR functions)—are already in place • Trained staff already exists 	<ul style="list-style-type: none"> • Call transfers introduce the opportunity of other call-processing threats, such as the potential for dropped calls, missing call data, and lack of cohesive recording (audio and paper trail) of calls requiring multijurisdictional response • Potentially longer call-processing times • No complete view of the call that requires monitoring of multiple agency response • Law enforcement policy set by a single agency with no stakeholder engagement • Law enforcement and fire/EMS dispatch is split between two agencies • Coordination of events requiring multijurisdictional response or mutual-aid is compromised and creates inefficiencies in communications 	<p>changes in policy or administrative service—will have to be conducted.</p>

Rockford and Alternates

MCP analyzed the various options outlined in the RFP that involved a City PSAP and a new PSAP established by the municipalities. MCP’s cost analyses and projections indicate that increases will range between \$2.4 million and \$3.2 million above the countywide baseline cost of 911 service.

These options combine some of the governance challenges mentioned in the previous options. Two different cost-sharing models will need to be selected. There will need to be one PSAP with an advisory board, and another with a governance board because it is a regional center.

Any of the options that involve the new PSAP could consider a privatization option. However, MCP recommends a separate specification be developed by an independent party selected from potential respondents to form the basis of a formal request for proposals (RFP). Privatization has shown the ability

to reduce costs in many instances and is becoming more common. MCP was not provided any quotations obtained from companies that can privatize the PSAP during the data-gathering process.

Publicly available data does not provide the level of detail needed to analyze privatization fairly within the scope of this report. For instance, one example of privatization revealed a cost of \$72,000 per dispatch FTE, including a supervisor and a training officer. However, details were not available as to the level of technology and operational responsibility that this contract contained. Other privatization options were found nearby that were coupled with EMS contracts. MCP would be wary of any quoted prices from vendors that have been solicited without a formal assessment of the situation that the privatization is meant to replace—however, we concur that this is an option that could prove beneficial if executed thoughtfully.

Benefits	Concerns	Other Considerations
<p><u>Rockford and Alternate #1</u></p> <ul style="list-style-type: none"> • Opportunity for greater input and stakeholder engagement in development of policies that impact their service • Consolidates all municipal law enforcement dispatch creating more seamless operation • Consistency in operations helps to make the call-taking process more efficient and effective <p>Alternate 1A (with Fire and EMS)</p> <ul style="list-style-type: none"> • Law enforcement dispatch can be consolidated under one operational structure <p>Alternate 1B (No Fire and EMS)</p> <ul style="list-style-type: none"> • All public safety dispatch is consolidated in a single operation • There is opportunity for greater shared governance for dispatch policy- and decision-making that impact the stakeholder agencies 	<p><u>Rockford and Alternate #1</u></p> <ul style="list-style-type: none"> • Fire/EMS dispatch is bifurcated between two agencies • Law enforcement and fire/EMS policy is set independently by a responsible agency, creating opportunity for differing policies for law enforcement dispatch between city and municipalities • Law enforcement and fire/EMS dispatch could be split between two agencies; even law enforcement could be split between two operations • Coordination of events requiring multijurisdictional response or mutual-aid is compromised and creates inefficiencies in communications • Fire/EMS still could be split from law enforcement dispatch, creating more challenging coordination of joint response events 	<p><u>Rockford and Alternate #1</u></p> <ul style="list-style-type: none"> • Assessment of staffing for the selected option will need to be conducted and workforce adjustments may be required if duties are going to be divided. If current PSAP staff is assigned other duties, an assessment of whether those ancillary duties can be continued under the new structure and configuration also will need to be considered. • Call-taking and dispatch will require greater coordination because they are not included in the same operation. • Technology should be employed to transmit the call details to the dispatcher

Benefits	Concerns	Other Considerations
	<ul style="list-style-type: none"> • Some moderate joint decision-making and policy development between two-thirds of the stakeholder groups • Call-taking and dispatch will require greater coordination as they are not included in the same operation. • Technology should be employed to transmit the call details to the dispatcher. 	
<p><u>Rockford and Alternate #2</u></p> <ul style="list-style-type: none"> • Opportunity for improved call-processing time • Opportunity for reduced transfers and more seamless call-taking and dispatch functions • Full view of the call from ingress to response for majority of services • Simplified record keeping 	<p><u>Rockford and Alternate #2</u></p> <ul style="list-style-type: none"> • Governance will be under the control of one agency and needs to ensure inclusion of all stakeholders • Municipal law enforcement separated • Difficult event coordination when multiple law enforcement agencies are involved • May involve incorporating several labor groups • Technology and physical plant upgrades will be needed, planned, and funded 	<p><u>Rockford and Alternate #2</u></p> <ul style="list-style-type: none"> • Further assessment of staffing for the selected option will need to be conducted and workforce adjustments may be required if duties are going to be divided. • A practical matter concerns where the municipal dispatch operation will reside and function. Will a new facility or location need to be identified? Will equipment and technology, such as radio connections, need to be installed? Who will manage the operation? What staff will need to be added? From where will administrative support for HR and payroll come? What are the costs associated with standing up a new operation?

The table below represents a highlighted summary of all options analyzed by MCP. This includes the number of personnel, broken down by discipline and location, along with the total costs of each option.

	Costs				Line Personnel Summaries		
	Personnel Costs	Operational Costs	Systemization Costs	Total Cost	Rockford PSAP Staffing	County PSAP Staffing	Municipal / Other PSAP Staffing
Baseline	\$6,847,714	\$2,329,085	\$0	\$9,176,799	TOTAL: 44 4 Supervisors, 4 Assistant Supervisors, 36 Telecommunicators	TOTAL: 21 4 Supervisors 17 Telecommunicators	-
Rockford Full Governance	\$8,327,227	\$244,573	\$252,500	\$8,824,300	TOTAL: 84 8 Supervisors 76 Telecommunicators	-	-
County Full Governance	\$6,190,780	\$244,573	\$245,000	\$6,680,353	-	TOTAL: 84 8 Supervisors 76 Telecommunicators	-
County Law - Rockford Fire/EMS	\$7,954,506	\$1,610,921	\$728,750	\$10,294,177	TOTAL: 36 4 Supervisors 32 Telecommunicators	TOTAL: 64 8 Supervisors 56 Telecommunicators	

	Costs				Line Personnel Summaries		
	Personnel Costs	Operational Costs	Systemization Costs	Total Cost	Rockford PSAP Staffing	County PSAP Staffing	Municipal / Other PSAP Staffing
Rockford & Alternate #1	\$9,257,757	\$2,303,215	\$728,750	\$12,289,722	TOTAL: 66 8 Supervisors 58 Telecommunicators	-	TOTAL: 40 4 Supervisors 36 Telecommunicators
Rockford & Alternate #2	\$8,974,801	\$1,881,080	\$728,750	\$11,584,631	TOTAL: 84 8 Supervisors 76 Telecommunicators	-	TOTAL: 16 16 Telecommunicators
Fully Consolidated PSAP	\$6,577,381	\$244,573	\$245,000	\$7,066,954	-	-	TOTAL: 84 8 Supervisors 76 Telecommunicators

Recommended Solution – Consolidated Municipal Center at County PSAP and Rockford PSAP

Given the current status of the 911 system—with financial and political dynamics driving the need for an immediate staffing solution—MCP recommends a variant of the Rockford and Alternate #2 model. The City would continue to operate its PSAP for Rockford police, fire and EMS. Once a governance body is established, the municipalities currently served by the County PSAP would assume control of that facility to form the foundation of a consolidated PSAP. MCP recommends that this solution be implemented in a phased approach that takes into consideration the significant challenges that 911 service in Winnebago County has faced to date.

This consolidated PSAP initially would operate as a secondary PSAP in the WSCO facility and in an active-active configuration, with the City PSAP becoming the primary PSAP. In an active-active configuration, two geographically diverse PSAPs function as one. This consolidated PSAP will give municipalities the opportunity to develop a model that adequately funds the center yet allows for collaborative governance. While WSCO certainly could consider being dispatched out of the City PSAP, their collaboration with a newly formed municipal PSAP as a participant would better equalize the call volume and cost sharing between the two PSAPs.

Benefits	Concerns	Other Considerations
<ul style="list-style-type: none"> • Highest level of stakeholder input; governance is shared • Improved call-processing time • Reduced transfers and more-seamless call-taking and dispatch functions • Full view of the call from ingress to response for majority of services • Better coordination of events requiring multiple jurisdiction, multi-agency response • Simplified record keeping • Consistency in operations help to make the call-taking process more efficient and effective • Trained staff already exists • All agencies participate in creation of structure and policy • Meets guiding principle goals • One of the existing 911 facilities could be converted into a backup center with very little cost 	<ul style="list-style-type: none"> • Consideration of combining two different workgroups with different pay schedules, benefit packages, job descriptions, etc. May involve collaboration with several labor groups • Administrative functions such as HR, payroll, etc., will have to be contracted or established internally • Existing facilities may not be adequate for a consolidated operation. Physical facility analysis would have to be conducted • Cost may be a factor; funding allocations will have to be established among the parties and with their input • The need to establish a countywide fire/EMS radio system 	<ul style="list-style-type: none"> • Additional study will be necessary to fully explore this option. Planning for facility needs, staffing needs, equitable costs and cost-allocation formulas, labor discussions, more in-depth governance discussions, timelines, administrative service, and management will be required. • Leadership will be needed from the City, County and municipalities to further evaluate this option

The estimated costs of the recommended solution are listed in the table below:

Rockford PSAP and Alternate PSAP				
	Rockford PSAP	Alternate PSAP	ETSB Cost	Total
Personnel Costs: Including telecommunicator, administrative and management salaries, overtime and benefits. Rockford CBA used for the City PSAP; IDES median wages used for the alternate PSAP	\$5,678,710	\$3,233,035	\$346,012	\$9,257,757
Operational Expenses (Non-ETSB): Based on current budget of City PSAP and estimated budget for alternate PSAP (based on estimated 25% operating expenses of total budget)	\$216,108	\$808,259	\$1,366,348	\$2,390,715
Systemization Costs: Based on \$30,000 budget per fire department for radio system relocation and consolidations, recorder reconfiguration at alternate PSAP, and continued bond payment for ETSB	\$0	\$240,000	\$476,250	\$716,250
Total Costs	\$5,894,818	\$4,281,294	\$2,188,610	\$12,364,722
Baseline Cost	\$4,806,768	\$0.00	\$1,849,292	\$9,157,126
Difference between Option and Baseline Costs	\$1,088,050	\$4,281,294	\$339,318	\$3,207,596
ETSB-Funded Staffing Reimbursements: Call-takers	TBD	TBD	TBD	\$0.00
Remaining Amount to be Funded by Stakeholders	\$5,894,818	\$4,281,294	\$2,188,610	\$12,364,722

The staffing needs for the recommended solution are identified in the table below:

	City PSAP		Alternate PSAP		ETSB	
	Current	Proposed	Current	Proposed	Current	Proposed
PSAP Director	1	1	0	1		
Supervisors	8	8	0	4		
Call-Takers	12	23	0	19		
Law Enforcement Dispatchers	12	17	0	18		
Fire/EMS Dispatchers	12	13	0	4		
ETSB – 911 Director					0	1
ETSB – MSAG Coordinator					0	1
ETSB – Training Coordinator					0	1
ETSB – Technical Services					0	1
TOTAL	45	62	0	46	0	4
Estimated Cost	\$5,678,710		\$3,233,036		\$346,012	

Note: Rockford current supervisors include four "assistant" supervisors; Rockford current call-takers and law enforcement dispatchers are split between the two but reported as in the same CBA.

As indicated in the data above, this option seems to best equalize the costs amongst the various stakeholder groups. Although the City PSAP's estimated cost shows an increase above the baseline (\$1,088,050), it should be noted that this is attributed to the recommended increase in staffing at the City PSAP based on MCP's staffing analysis. Ultimately, the City PSAP's leadership can develop a plan to incrementally increase staffing according to MCP's recommendations as well as operational and contractual limitations that works best for the City. During this process, leadership also should consider any potential participation in the consolidated regional center.

MCP considered the following key factors when determining its recommendation:

- Although MCP recommends that the ETSB moves towards a fully consolidated model, we recognize that the constraints outlined in this report would prevent an immediate migration from being successful.
- MCP is confident that two PSAPs in an active-active configuration can remain a viable solution until a fully consolidated model can be achieved. MCP only recommends this where law enforcement dispatching can be collocated with the associated fire and EMS services, which this model provides.
- The WCSO PSAP staffing situation is approaching a critical situation.
- The WCSO PSAP already is equipped and easily could be outfitted to serve as a regional center.
- The agreement between the City and County should continue because it provides a good stabilization option that enables the municipalities to stand up the new consolidated PSAP in a phased approach. Rockford would handle all call-taking countywide.
- The stakeholders could consider a phased implementation of the municipal center—to allow time for the hiring of staff, and implementation of the new NINGA and CAD projects.
- Rockford will have the option to migrate its PSAP to the fully consolidated PSAP—at a pace that allows the City to adequately negotiate with its collective bargaining units.

Short-Term Measures:

The ETSB should implement measures that—although bearing some cost—will help it ensure that the move toward consolidation and stabilization is thoughtful and well-planned. These measures include the following:

- Hire a countywide 911 director who oversees the ETSB's implementation of the consolidation plan going forward.
- As funding permits, the ETSB should hire or transfer from existing PSAPs the following staff:
 - MSAG coordinator
 - Training and quality assurance coordinator
 - Technical services coordinatorHaving these staff as part of the ETSB ensures that their efforts are focused on improvements that are beneficial to the system as a whole. The ETSB should be setting the direction for countywide progress—not individual PSAPs. MCP's opinion is that the roles that are filled by these positions help to set that direction toward standardized, consolidated 911 service in Winnebago County.
- The ETSB should encourage County fire/EMS services to migrate to the regional center once it is established. This would enhance response coordination and eliminate the delay caused by call transfers to RDPs, while potentially reducing costs for some departments.
- It is MCP's recommendation that, at a minimum, the ETSB should establish new guidelines for the RDPs, including:
 - Development of a more effective method for handling the dispatch of backup EMS services, should the primary service not be available.
 - At a minimum, the police should have the ability for direct radio communications with the responding EMS service and be updated as to which service is responding.
 - Implementation of technology that improves the situational awareness of the call at both the PSAP and the RDP, including:

- Access to newly implemented County CAD system or a CAD-to-CAD interface, at a minimum
 - Transferring of ANI/ALI information
 - Development of a minimum level of training, including EMD standards, for RDPs to achieve before receiving transferred 911 calls
 - Development of a minimum level of quality assurance metrics that should be reported, to enable the ETSB to assess whether Winnebago County is meeting a consistent level of service.
- Once the standards and guidelines for RDPs are developed, the ETSB should approve the practice of transferring calls (and caller information) only for RDPs that have met the standard.

The end goal should be an evolutionary process toward a consolidated PSAP. The County should consider initiating the use of call-taking support from the City to assist in the staffing shortage. This would enable the County PSAP to reduce the shift minimums focusing primarily on law enforcement dispatching. The City would adjust staffing levels incrementally to the recommended levels. At the same time, the ETSB, County and municipalities can begin the process of establishing the County PSAP as an RDP until the governance structure and a 911 advisory board can be established, along with the ETSB staffing discussed above. The ETSB would need to submit an updated 911 plan and complete new IGAs. A funding committee will need to be established to review the different cost-sharing options presented in this report and come to agreement before moving forward.

If Rockford chooses to participate in the fully consolidated PSAP, the estimated costs for the consolidated model are provided in Section 7.8. If a fully consolidated PSAP is achieved, then the roles of 911 director, MSAG coordinator, training and quality assurance coordinator, and technical services coordinator can be delegated to staff that function as a part of the consolidated PSAP, as opposed to the ETSB.

9 Appendices

Appendix 1 – Staffing Methodology

A staffing analysis is conducted to determine whether a PSAP has an adequate number of personnel to assure efficient processing of emergency calls now and/or to determine the number of personnel that may be needed in the future—although the farther into the future one looks, the more difficult it is to predict. A forward-looking staffing analysis considers projected population growth to assure that the agency is well-positioned in its future planning efforts and that it meets the expectations of the public and the agencies it serves. Operational efficiency is gauged by comparing statistical data and personnel utilization to appropriate national standards.

Additionally, a staffing analysis often is conducted to assess the number of physical console positions required for PSAP operations and how many of these positions should be routinely staffed throughout the day. The number of required positions can be used to assist in programming any future facility to ensure that adequate space is allotted.

Industry tools are available to assist with determining baseline staffing requirements for call-takers, dispatchers, and supervisors. The Association of Public-Safety Communications Officials, International (APCO) offers Project RETAINS,³⁹ developed by the University of Denver Research Institute in 2004. The RETAINS toolkit 2.0 expanded its functionalities and capabilities.⁴⁰ The National Emergency Number Association (NENA) offers a Communications Center Staffing Tool, which is available through a staffing workshop or the center manager program.⁴¹ Both tools utilize agency-specific data, such as call and incident volumes and other data, such as employee leave, to calculate baseline staffing requirements. One difference between the tools is that NENA considers the workload in terms of incidents that a dispatcher can or should be able to handle at one time, whereas RETAINS does not. While this is a subjective number, the agency itself defines the parameters.

MCP's staffing analysis involves a multimodal approach that considers workload, volume- and coverage-based staffing, and performance metrics. Volume-based staffing calculates the number of staff required to handle the volume of the respective data, while coverage-based staffing calculates the number of personnel staff required to staff one position 24 hours a day, 7 days a week (24 x 7). MCP uses these calculations in tandem. Statistical calculations are balanced with operational logistics to identify how many personnel are needed for a PSAP to achieve its performance goals while providing efficient and effective service. In addition to APCO and/or NENA tools, MCP uses Erlang C calculations and its experience in the

³⁹ "APCO Project RETAINS," APCO International, 2018, <https://www.apcointl.org/resources/staffing-and-retention/retains.html>.

⁴⁰ RETAINS is available for a subscription. From appearances, the last update was in 2009.

⁴¹ Both the workshop and the center manager program are available for a cost. NENA notes that the workshop is hands-on, that has "you using the Tool during the workshop to determine your center's staffing needs at a high-level. You will use a combination of facilitator-provided practice data and your PSAP's actual data to determine the staffing needs of your center." <http://www.nena.org/?page=CommCenterStaffing>.

911 community to assist in projecting the number of staff required to efficiently answer and dispatch emergency and non-emergency calls for law enforcement, fire, and emergency medical services (EMS) agencies. MCP analyzes resulting data with a respective center's operational configuration to approximate staffing requirements. The value of any resulting staff projections is dependent upon the accuracy of the data and statistics provided by the PSAP. Winnebago County and Rockford provided statistical data, including incident volume, call volume, and personnel data for review.

Many factors play a role in determining appropriate staffing levels, including available work hours, utilization, and attrition rates. Available work hours are the number of hours a telecommunicator (call-takers and dispatchers) is available to work during a year. There are many subfactors to this calculation, including leave usage, i.e., any time that the employee is away from their assigned duties. This time includes vacation, holiday, sick, and personal leave; training; military leave; and other activities. Both Winnebago County and Rockford operate on the Panama schedule with 12-hour shifts; every other weekend is a three-day weekend off.

In 2017, Winnebago County⁴² telecommunicators⁴³ used approximately 2,689 hours of leave, or 192 hours per person. In 2017, Rockford telecommunicators used approximately 13,560 hours of leave, or 410 hours per person. Rockford supervisors used approximately 1,334.25 hours of leave, or 333 hours per person. This is not to say that each person used this amount of respective leave; some may have used less, some may have used more. Based on a 12-hour day, this ranges from 16 days to 34 days of leave per person (24 to 51 eight-hour days). According to an August 2013 U.S. Bureau of Labor Statistics publication, the average number of paid leave days for five years of service in the private sector is 30; 34 days for 10 years; 38 days for 20 years.⁴⁴ Thus, the 2017 leave usage in Rockford aligns with the private sector.

Utilization is a subjective number, designed to provide an estimate of the time per shift that a telecommunicator should be busy providing call-handling and dispatching services.⁴⁵ Breaks and meals are subtracted from the shift length, as is time spent doing other work-related activities, such as filing paperwork or decompressing after a stressful incident. Winnebago County and Rockford telecommunicators are allocated approximately 60 minutes of breaks and meals per shift. In MCP's experience, telecommunicators may spend four to seven minutes per hour on other work-related activities. MCP used five minutes for this assessment, with the resulting utilization (or agent occupancy rate) rate for both Winnebago County and Rockford at 84 percent. As APCO notes, "Researchers in commercial call centers report increased employee turnover and 'undesirable' agent behaviors when agent occupancy rates exceed 85 to 90% over extended periods of time." Unfortunately, always trying to maintain utilization below 85 percent can lead to overstaffing.

⁴² Some of the data provided appeared to have missing elements or contained errors in calculations; as such, MCP used the provided data and corrected calculations.

⁴³ Those whose primary assignment is shift work.

⁴⁴ "Paid leave in private industry over the past 20 years," Bureau of Labor Statistics, August 2013, <http://www.bls.gov/opub/btn/volume-2/paid-leave-in-private-industry-over-the-past-20-years.htm>.

⁴⁵ Utilization should not be confused with agent occupancy. Utilization is the total time an employee is at work and able to do their respective tasks, such as call take and dispatch. (This would not occur on breaks, for example.) Occupancy is the actual time at work busy on assigned tasks. This link (<http://www.thinkhdi.com/~media/HDICorp/Files/Library-Archive/Insider%20Articles/agent-occupancy.pdf>) provides good information.

Calculating the network hours (scheduled hours less leave) and the utilization rate results in the true availability of an employee. For Winnebago County this is 76.7 percent, while Rockford is 67.7 percent. In the case of Rockford, for example, this means that a telecommunicator is scheduled to work 2,184 hours, but subtracting leave and the entitled breaks, an employee may only work 1,478 hours during a year.

Attrition, also referred to as turnover, is a factor that must be considered. The attrition data includes the highest number of employees for a given year as well as the number of staff that left voluntarily or involuntarily. The result is the attrition rate. The national average for recent years is estimated to be approximately 13 percent; however, MCP is aware of several PSAPs whose attrition rate has been higher than 15 percent, and some upwards of 25 percent. The APCO RETAINS Retention report does not have a current turnover rate, reporting 2009 data as its latest reference. In its report, APCO RETAINS identifies the national turnover rate at 17 percent for 2005 and 19 percent for 2009.⁴⁶ While not all data needed to calculate this rate was provided, estimates for both PSAPs, based on available data, are less than 13 percent.

Staffing calculations also should consider performance metrics, which measure the operational efficiency of a PSAP compared with targeted goals and established standards. MCP uses performance metrics and national standards to ascertain how staffing may be positively or negatively affecting PSAP operations.

The most common metric involves the average time it takes a PSAP to answer its incoming emergency calls. PSAPs typically try to align their call-answering goals with either NENA or National Fire Protection Association (NFPA) standards.

NENA 56-005, *Call Answering Standard/Model Recommendation*, states, "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 00-001). Ninety-five (95%) of all 9-1-1 calls should be answered within twenty (20) seconds."⁴⁷

NFPA has higher standards for call-processing. NFPA, also a non-profit organization, "delivers information and knowledge through more than 300 consensus codes and standards, research, training, education, outreach and advocacy ..."⁴⁸ NFPA 1221, 2016 Edition, Section 7.4.1 states, "Ninety-five percent of alarms^[49] received on emergency lines shall be answered within 15 seconds, and 99 percent of alarms shall be answered within 40 seconds."⁵⁰

⁴⁶ According to the APCO RETAINS Retention document, the comparison rates were derived from Project RETAINS Study I and the RETAINS Next Generation Study.

⁴⁷ "9-1-1 Call Answering Standard," National Emergency Number Association," June 10, 2006, <https://www.nena.org/?page=911CallAnswerStd>, page 8 of 12.

⁴⁸ "NFPA Overview," National Fire Protection Association, 2017, <http://www.nfpa.org/about-nfpa/nfpa-overview>.

⁴⁹ NFPA 1221 defines an alarm as "a signal or message from a person or device indicating the existence of an emergency or other situation that requires action by an emergency response agency."

⁵⁰ "NFPA 1221 Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems," National Fire Protection Association, 2016, <http://www.nfpa.org/codes-and-standards/all-codes-and-standards/list-of-codes-and-standards/detail?code=1221>.

Data for April 2018 indicates that Winnebago County met both standards with the exception of four days, when staffing or training presented issues. Rockford met the NFPA standard every day and met the NENA standard every day but two.

Another metric is the abandoned call rate. Every center will experience abandoned calls; the goal is to keep them as low as possible. There are many reasons for abandoned calls, including those who realized they have misdialed. When staff members are on another line, incoming calls cannot be answered immediately. Regardless of the reason, this creates additional work as staff must try to reestablish contact with the caller to determine if there is an actual emergency. There is no industry metric for a “normal” number of abandoned calls. In MCP’s experience, an abandoned call rate of 8 percent or less is ideal and attainable when a center is appropriately staffed. MetricNet, a performance-benchmarking company in McLean, Virginia, for information technology and call centers, suggests an abandoned call rate of 4 percent to 7 percent⁵¹—while their focus is on the service industry, not the 911 sector, there is a correlation between the two. Both are answering calls from the public in response to their stated mission or objective. Winnebago County’s abandoned call rate for 2017 was approximately 9.4 percent. Data was not provided for Rockford.

⁵¹ “Call Abandonment Rate,” MetricNet, May 23, 2012, <http://www.metricnet.com/call-abandonment-rate>.

Appendix 2 – Legal Briefs and Opinions

OTTOSEN BRITZ KELLY COOPER GILBERT & DiNOLFO, LTD.

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July 16, 2018

Chief Derek Bergsten
Chairman
Winnebago County Emergency Telephone System Board
204 S. First Street
Rockford, Illinois 61104

Re: Opinion Regarding the ETSB Responsibility for Dispatch and the Use of
Surcharge Funds

Dear Chairman Bergsten:

The Winnebago County Emergency Telephone System Board has asked that I provide a legal opinion in response to a Memorandum on 9-1-1 Call Handling in Winnebago County which was received by the Winnebago County ETSB in May of 2018. This Memorandum was prepared by a law firm representing the City of Loves Park and other public safety agencies in Winnebago County. The Memorandum raises two issues for consideration. First, the question is posed as to whether or not the Winnebago County ETSB is legally required to not only provide 9-1-1 call answering services, but also to dispatch emergency assistance from first responders for all municipalities and fire districts within Winnebago County. The second question is whether or not Winnebago County or the ETSB have the legal authority to charge for the provision of public safety dispatch services. I believe that Illinois law does not mandate that the ETSB provide dispatch services for all public safety entities in the County and that the law does allow the charging of fees for dispatch service.

The Emergency Telephone System Act, 50 ILCS 750/1, defines a "9-1-1 system" as the "geographic area that has been granted an order of authority by the Commission or the Statewide 9-1-1 Administrator to use '9-1-1' as the primary emergency telephone number." 50 ILCS 750/2. That same section of the Emergency Telephone System Act defines the word "System" as "the communications equipment and related software applications required to produce a response by the appropriate emergency public safety agency or other provider of emergency services as the result of an emergency call being placed to 9-1-1." These definitions underlie the basic premise that the ETSB is empowered to maintain and operate a 9-1-1 system in the County and that the 9-1-1 system is to provide for the answering of 9-1-1 calls and the routing of those calls to public safety answering points (PSAPS) for processing and dispatch. Section 2 of the Emergency Telephone System Act also includes definitions of the terms "Direct Dispatch", "Relay method", and "Transfer method" which all describe how 9-1-1 calls are dispatched to first responders after receipt in the 9-1-1 call center. The direct dispatch method is far and away the most prevalent form of public safety communication dispatch in the State. Section 2 of the Emergency Telephone System Act defines "Direct dispatch" as "a 9-1-1 service that provides for direct dispatch by a PSAP telecommunicator of the appropriate unit upon receipt of an emergency call and the

OTTOSEN BRITZ KELLY COOPER GILBERT & DiNOLFO, LTD.

Chief Derek Bergsten
July 16, 2018
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decision as to the proper action to be taken." This statutory scheme clearly reflects a separation between the ETSB's duty to maintain the 9-1-1 system and the provision of dispatch services for the public safety agencies in the County.

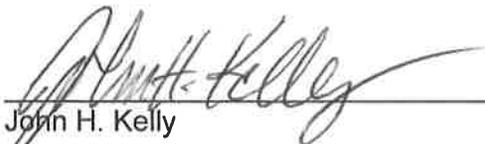
The second issue raised in the Memo concerns the ability of the County, or any other entity for that matter, to charge for the provision of dispatch service. The Memo cites the fact that the ETSB collects surcharge fees from telephone service subscribers which provides the funding source for 9-1-1 service and dispatch and obviates the ability of the County to charge to provide dispatch service. As pointed out above, it is important to note that the 9-1-1 system and a dispatch operation are two separate concepts.

In its Memo, the City points out that the Illinois Attorney General has issued an opinion in which the Attorney General found that 9-1-1 surcharge fees could be used to pay dispatch salaries. 1998 Ill. Att'y Gen. Op. 009; (Page 5 of Comprehensive Memorandum of Law). It is important to read the rest of the Attorney General's Opinion in which the Attorney General goes on to state that surcharge monies may not "be used to compensate personnel for performing functions that are unrelated to the operation of the emergency telephone system." The Opinion concludes with the statement that, "The portion of the employee's compensation related to time expended for other functions must be paid from other funding sources." 1998 Ill. Att'y Gen. Op. 009 at page 5. This language clearly infers that dispatchers, when not answering 9-1-1 calls should be paid from sources other than surcharge funds.

Throughout Illinois, units of local government and creatively established consolidated dispatch centers through the use of the Illinois Intergovernmental Cooperation Act, 5 ILCS 220/1. Each of these dispatch centers charge their members or agencies for the provision of public safety dispatch service. The funding formulas for these consolidated dispatch operations are varied and take into account factors such as call volume, size of agencies and financial resources of the members. It is my understanding that as part of the on-going study, Mission Critical Partners will recommend some funding formulas for Winnebago County.

Should you, or any of the members of the ETSB, have any additional questions, or need any additional information, please do not hesitate to contact me.

Sincerely,



John H. Kelly

JHK/sk

Executive Summary Regarding the Law on 9-1-1 Call Handling in Winnebago County Illinois

May 7th, 2018

The purpose of this Executive Summary is to succinctly summarize what has been determined by means of legal research on the state of the law as it pertains to threshold issues, including: Whether the County of Winnebago has a legal duty to provide 9-1-1 services to the municipalities within the County, other than the City of Rockford, including not only answering and transferring calls, but also the dispatching of emergency assistance from first responders; and, assuming the County continues to provide 9-1-1 services to the municipalities within the County, other than the City of Rockford, whether the County has the power to impose a fee or charge on the municipalities for such services. The legal research referred to here in general terms is set forth in more detail in a separate Memorandum, with citations to and relevant quotations from legal authorities.

overall, the research indicates that the County cannot immediately and unilaterally abandon the status quo as it concerns providing 9-1-1 services to the municipalities in this coalition. The County has a duty to make sure that all 9-1-1 calls within the County are handled, and how it is to fulfill that duty is described in the ICC Order which approved the County's Plan. The County's obligations are derived from various sources, such as statutes, the Plan approved in the ICC Order and intergovernmental agreements to which the County is a party. The agreements between the County and individual municipalities are being evaluated for each municipality.

Presumably the Plan and the agreements would have to be amended by the appropriate processes to allow any fundamental changes from the status quo that the County may pursue, either in how 9-1-1 calls are handled or how they are paid for. At such a juncture the municipalities could advance their argument that, especially based on the Emergency Telephone System Act (ETSA), the County is obliged to provide dispatching for the 9-1-1 calls, as an inherent and indispensable part of the 9-1-1 system. The County may have leeway to make minor changes in the 9-1-1 services, but only changes which maintain the existing two Public Safety Answering Points (PSAPs) and which do not conflict with any of the requirements in the Plan, the intergovernmental agreements or the ETSA itself.

Regarding the threshold legal issue of whether the County has a duty to provide 9-1-1 services to the municipalities, including not only taking and transferring calls, but especially dispatching emergency assistance, there is a viable argument for the municipalities that the County does have such a duty. However, because research has not uncovered dispositive case law on this issue, the conclusion is not straightforward and free from doubt. Rather, the analysis depends on examination of a variety of sources of law affecting this situation, including especially: the ETSA; the Order from the Illinois Commerce Commission which approved the

Executive Summary Regarding the Law on 9-1-1 Call Handling in Winnebago County Illinois

May 7th, 2018

County's Plan; court decisions; and intergovernmental agreements between the County and municipalities in the County.

Collectively, these sources of law lend some weight to a legal position that the County and its Emergency Telephone System Board (ETSB) have a legal duty to provide full 9-1-1 services, including dispatching, to the municipalities. Pertinent portions of these sources of law make repeated references to the dispatching component of 9-1-1 services as being among the County's functions and responsibilities. They indicate that dispatching is an essential part of the 9-1-1 services, and may support an argument that the County has a duty to provide that part of the service, not merely answering calls and transferring them. However, a legal position that is based largely if not exclusively on interpretation of terms in the relevant statutes and other documents is not as unassailable as one derived from on-point decisions by Illinois courts would be.

Assuming the County continues to provide 9-1-1 services to the municipalities within the County, other than the City of Rockford, the question arises as to whether the County has the power to impose a fee or charge on the municipalities for such services. The above-referenced sources of law are silent on this issue. That is, they do not expressly give the County that power. It is established law in Illinois that non-home rule counties, such as the County of Winnebago, have only such powers as are expressly granted to them by the legislature, or arise by necessary implication from expressly granted powers, or are indispensable to the purpose of the local government entity's existence. In addition, the powers of local governments in Illinois are to be strictly construed against the government entity, and not enlarged by liberally construing the relevant statutes.

The County could make a plausible argument that its expressly granted power to operate a 9-1-1 system necessarily implies the power to impose fees or charges against the municipalities which receive its 9-1-1 services. However, effective counter-arguments for the municipalities may be that, had the legislature intended the County to have the power to impose the fees or charges it would have expressly granted that power, and that the legislature's creation of a different funding source and mechanism, through surcharges on telephones and cell phones, weighs against the existence of any implied power to impose fees or charges on the municipalities. Moreover, any contention by the County that having the power to impose the fees for 9-1-1 services is indispensable to the purposes for the County's very existence does not seem to have merit.

If the County contends that basic fairness and equity should allow it to impose the fees in question, an effective response for the municipalities, based on case law from Illinois and elsewhere, is that equity cannot be used to confer on a local government entity powers that lack legal authorization. Similarly, if the County argues that the municipalities should be equitably

estopped from opposing or declining to pay such fees, it is in the municipalities' favor that equitable estoppel may be applied against municipalities only in extraordinary and compelling circumstances which are not present here. Moreover, the general rule against applying equitable estoppel to municipalities carries even greater weight where, as here, the municipalities' public revenues are at stake.

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FACTUAL SUMMARY

The client is the City of Loves Park, Illinois, which is situated in the County of Winnebago. Loves Park is one of ten local governments in the County which receive 911 emergency call services from the County's Emergency Telephone Systems Board (ETSB).

There are detailed statutes and regulations in Illinois which apply to the formation and operation of emergency call services.

In 1990 the County obtained from the State of Illinois the authority to handle 911 calls in the County. The 911 services are funded, in part, by a surcharge placed on telephone land lines and on cell phones. In the County the surcharge generates approximately \$2.5 million a year. As required by law, the County submitted to the Illinois Commerce Commission (ICC) (later replaced in this role by the Illinois State Police) a Plan for the operation of the ETSB. The ICC approved the County as the ETSB, to operate in a manner consistent with the plan.

The County's Plan called for multiple call centers, call PSAPs (Public Safety Answering Points). Currently there are two PSAPs in the County. One PSAP is managed by the City of Rockford, the largest city in the County, and the second is managed by the County. The City's PSAP handles only calls within the City, while the County's PSAP handles all other calls in the County, including those in the City of Loves Park and the other nine local government entities within the County.

The amount of money required to run the two call centers greatly exceeds the funds received by the ETSB from the surcharge on phones. The ETSB uses the surcharge funds to cover the costs of equipment and facilities at the call centers, and then has about \$500,000 left over. That money is split between the call centers, going toward labor costs. However, the labor costs substantially exceed that amount, resulting in a deficiency.

The County proposed to the City of Rockford that the County would close its call center, ostensibly to improve efficiency and cost effectiveness, leaving the City's PSAP as the only call center in the County. The City agreed, on the condition that the County pay \$1 million, and the ten local governments would collectively pay the City \$1.5 million. This represents about a 400% increase over what those local governments are currently paying, under intergovernmental agreements.

Nine of the local governments, including the City of Loves Park, have joined together to resolve the issues, protect their interests and negotiate with the County.

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LEGAL ISSUES

I. Does the County have a legal duty to provide 911 services to the municipalities within the County, other than the City of Rockford, including not only answering and transferring calls, but also the dispatching of emergency assistance from a first responder?

The following sources of law indicate how the dispatching part of the 911 service is an essential component of the service, and may lend support to an argument that the County has a duty to provide that part of the service, not merely answering calls and transferring them.

A. Statutes (Emergency Telephone System Act; 50 ILCS 750)

It is the purpose of this Act to establish the number "9-1-1" as the primary emergency telephone number for use in this State and to encourage units of local government and combinations of such units to develop and improve emergency communication procedures and facilities in such a manner as to be able to quickly respond to any person calling the telephone number "9-1-1" seeking police, fire, medical, rescue, and other emergency services.

50 ILCS 750/1.

"Public safety answering point" or "PSAP" is a set of call-takers authorized by a governing body and operating under common management that receive 9-1-1 calls and asynchronous event notifications for a defined geographic area *and processes those calls and events according to a specified operational policy.*

"Secondary Answering Point" or "SAP" means a location, other than a PSAP, that is able to receive the voice, data, and call back number of E9-1-1 or NG9-1-1 emergency calls transferred from a PSAP and completes the call taking process by *dispatching* police, medical, fire, or other emergency responders.

"Virtual answering point" or "VAP" means a temporary or nonpermanent location that is capable of receiving an emergency call, contains a fully functional worksite that is not bound to a specific location, but rather is portable and scalable, connecting emergency call takers or dispatchers to the work process, *and is capable of completing the call dispatching process.*

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"System" means the communications equipment and related software applications required to produce a response by the appropriate emergency public safety agency or other provider of emergency services as a result of an emergency call being placed to 9-1-1.

50 ILCS 750/2 (emphasis added).

Every system shall include police, firefighting, and emergency medical and ambulance services, and may include other emergency services. The system may incorporate private ambulance service. In those areas in which a public safety agency of the State provides such emergency services, the system shall include such public safety agencies.

50 ILCS 750/4.

Capabilities of system; pay telephones. All systems shall be designed to meet the specific requirements of each community and public agency served by the system. *Every system shall be designed to have the capability of utilizing the direct dispatch method, relay method, transfer method, or referral method in response to emergency calls.* The General Assembly finds and declares that the most critical aspect of the design of any system is the procedure established for handling a telephone request for emergency services.

50 ILCS 750/6 (emphasis added).

The Emergency Telephone System Board and the Chairman of the County Board in any county implementing a 9-1-1 system shall ensure that all areas of the county are included in the system.

50 ILCS 750/10.2.

All local public agencies operating a 9-1-1 system shall operate under a plan that has been filed with and approved by the Commission prior to January 1, 2016, or the Administrator. Plans filed under this Section shall conform to minimum standards established pursuant to Section 10 [Technical and Operational Standards].

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50 ILCS 750/11.

The Attorney General may, on behalf of the Department or on his own initiative, commence judicial proceedings to enforce compliance by any public agency or public utility providing telephone service with this Act.

50 ILCS 750/12.

(a) In no event shall a public agency, the Commission, the Statewide 9-1-1 Advisory Board, the Administrator, the Department of State Police, public safety agency, public safety answering point, emergency telephone system board, or unit of local government assuming the duties of an emergency telephone system board, or carrier, or its officers, employees, assigns, or agents be liable for any civil damages or criminal liability that directly or indirectly results from, or is caused by, any act or omission in the development, design, installation, operation, maintenance, performance, or provision of 9-1-1 service required by this Act, unless the act or omission constitutes gross negligence, recklessness, or intentional misconduct.

....

(c) This Section may not be offered as a defense in any judicial proceeding brought by the Attorney General under Section 12 to compel compliance with this Act.

50 ILCS 750/15.1 (emphasis added).

50 ILCS 750/15.3 (Local non-wireless surcharge).

50 ILCS 750/15.3a (Local wireless surcharge).

50 ILCS 750/15.4a (Consolidation)

(Provides for consolidation under various circumstances by July 1, 2016 or July 1, 2017, but not prospectively. Most provisions state that "Nothing in this paragraph shall preclude consolidation resulting in one PSAP in the county." Subsection (c) also states that "A waiver from a consolidation required under subsection (a) of this Section may be granted if the Administrator finds that the consolidation will result in a substantial threat to public safety, is economically unreasonable, or is technically infeasible.")

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50 ILCS 750/20 (Statewide surcharge).

Except as otherwise provided in this Act, expenditures from surcharge revenues received under this Act may be made by municipalities, counties, and 9-1-1 Authorities only to pay for the costs associated with the following:

....

(7) Other products and services necessary for the implementation, upgrade, and maintenance of the system and any other purpose related to the operation of the system, including costs attributable directly to the construction, leasing, or maintenance of any buildings or facilities or costs of personnel attributable directly to the operation of the system. Costs attributable directly to the operation of an emergency telephone system do not include the costs of public safety agency personnel who are and equipment that is dispatched in response to an emergency call.

50 ILCS 750/35((9-1-1 surcharge; allowable expenditures) See *also* 1998 Ill. Att'y Gen. Op. 009, at 1 (April 23, 1998)("I have your letter wherein you inquire whether county emergency telephone system funds may properly be expended for the costs associated with employing dispatchers for the emergency telephone system. For the reasons hereinafter stated, it is my opinion that payment of the costs of compensation and associated employee benefits of *dispatchers* who are employed to operate the communications equipment included in the emergency telephone system is a proper use of emergency telephone system funds.")(emphasis added).

50 ILCS 750/75 (Transfer of rights, functions, powers, duties, and property from Illinois Commerce Commission to Department of State Police)

50 ILCS 750/99 (This Act is repealed on December 31, 2020.)

B. State Regulations

Ill. Admin. Code, Tit. 83, Parts 1324-1329 contain Department of State Police regulations relating to the Emergency Telephone System Act. (Previous regulations of the Illinois Commerce Commission, in Parts 726 and 727, have been repealed.)

Ill. Admin. Code, Tit. 83, Ch. 4, Part 1326 deals with "Requirements for Private Business Switch Service to Comply with the Emergency Telephone System Act". While the regulations in Parts 1324-1329 may not directly address our issues, one such regulation states, in part, as follows:

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a) Each entity shall enter into call handling agreements with its internal emergency responders for police, fire and medical assistance. *The agreements must specify the method of dispatch that will be used in contacting the responders.*

.....

c) Each entity shall specify to the Administrator, in the plan required by Section 1326.305, *how calls will be dispatched to emergency responders* within its facility. In addition, the entity shall provide details concerning how additional public safety agencies or other providers of emergency services outside of the entity will be dispatched in the event that additional assistance is needed. Copies of the agreements must be included in the plan.

III. Admin. Code tit. 83, § 1326.510 (emphasis added).

C. Plan and Order

On October 18, 1990, a Final Plan was submitted by the County of Winnebago to the Illinois Commerce Commission. The cover letter for the Plan states that "Callers will be interrogated and the proper police, fire, or EMS responses required will be *dispatched*." (emphasis added).

The Narrative Statement for the Plan states, in pertinent part, that the public safety agencies for the County decided to "subscribe for *dispatching* service from one central *dispatch* center." (emphasis added). Throughout the Narrative Statement there are references to a dispatch center and to "dispatch operators".

Included in the Plan documents are two 1990 Agreements between the County and the City of Loves Park which state, in part, that the purpose of the Agreements is "*effective handling and routing* of 9-1-1 emergency calls". (emphasis added). Under the heading "Call handling", the Agreements state as follows:

The Winnebago County Central Dispatch System PSAP Center receiving a call for emergency services in your jurisdiction *shall dispatch the call* in the following manner:

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Primary:

Fire [or Police] Officials and other personnel of the Loves Park Fire [or Police] Department shall be contacted and alerted to respond to the location of an event requiring fire department [or law enforcement] assistance that was reported on a 9-1-1 telephone call.

Secondary:

The contact shall originate from the Loves Park Police Dispatch Center if the Central Dispatch System is unusable for any reason.

The December 9, 1991 Order of the Illinois Commerce Commission confirmed in all relevant respects the January 23, 1991 Interim Order of the Commission which approved the Plan submitted by the County of Winnebago to operate an emergency telephone number system.

The Interim Order mentions that the purpose of the Emergency Telephone System Act was to develop and improve emergency communication procedures and facilities "in such a manner as to allow local government units to "quickly respond" to persons calling for emergency services. (Interim Order, at 1)

The Interim Order further states that the County would have two "PSAP"s, that the system to be installed would be an enhanced "911" system, and that "Calls will be *dispatched* to the various public safety agencies" identified in the Interim Order. (Interim Order, at 2) (emphasis added).

D. Intergovernmental Agreements

The November 2005 Intergovernmental Agreement for the Operation and Funding of the Winnebago County Emergency Telephone System was entered into by the City of Rockford and the Winnebago County ETSB.

A "Whereas" clause in the Agreement describes the desire of the parties to split "call taking responsibilities", with the City receiving and dispatching all 9-1-1 calls originating in the City " . . . and the County *receiving and dispatching* all calls originating within Winnebago County but outside the City of Rockford;" (emphasis added).

Another "Whereas" clause states that the ETSB used its revenues to build facilities to equip them "for PSAP *and dispatch* functions only", and not for any other use. (emphasis added).

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Paragraph I(A) of the Agreement states that "The County PSAP will be the normal *dispatch* point for at least the Winnebago County Sheriff". (emphasis added).

Paragraph IV(B) of the Agreement states that the County shall have administrative responsibility for the 9-1-1 "emergency telephone *answering*" at the County PSAP, with a non-exclusive description of those responsibilities. (This is an exception to the general inclusion of dispatching in descriptions of the County's duties and responsibilities.)

Either party may terminate the Agreement upon giving twelve months notice to the other party.

There are two 2006 Agreements between the County and the City of Loves Park. A renewable "Intergovernmental Cooperation Agreement For Police Dispatching and Call Taking" states as follows, in part:

- I. The County shall furnish, supply, and provide the City with police *dispatching and call taking services* under the following guidelines:

....

- D. The services provided herein shall include, but shall not be limited to: *dispatching calls* for service, answering 9-1-1 calls and non-emergency calls.

- E. The City may request the County furnish additional police dispatching and call taking services.

- III. ...[T]he Sheriff shall retain control over all matters incidental to the performance of the police *dispatching* and call taking services provided for herein At no time shall any officer, official, or employee of the City undertake to direct any of the assigned personnel as to matters incidental to the performance of police dispatching and call taking services.

(emphasis added).

A shorter "Call Handling Agreement" between the County PSAP was made "for the purpose of effective handling and routing of 911 Emergency calls." It states, under the heading "Call Handling", that the "Winnebago County Sheriff's E-911 PSAP Center receiving a call for emergency services in your jurisdiction shall dispatch the call" in the designated manner.

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E. Court Decisions

In *Village of Montgomery v. Illinois Commerce Comm'n*, 249 Ill. App. 3d 484, 618 N.E.2d 1295 (1993), decided under the Emergency Telephone System Act, the court ruled that a city located in two counties could not disconnect from one county's emergency telephone system after approval of a system surcharge referendum in the county. Although the city could have elected to excuse itself from the county system at the time of the referendum, the court found that there was no legal basis upon which it could obtain detachment after the referendum.

Aside from the above-cited case, a headnote search and a full text Westlaw search in Illinois using the term "Emergency Telephone System Act" produced only a handful of cases. These cases deal with issues that are extraneous to the situation at hand, such as application of the immunity provision in the Act:

Donovan v. Vill. of Ohio, 397 Ill. App. 3d 844, 921 N.E.2d 1238 (3rd Dist. 2010)(County emergency telephone system board owed no duty of care to fire victim's widow to properly administer 911 emergency telephone system which, allegedly, may have prevented victim's death if system had not failed, even though widow alleged that defendants were not entitled to qualified immunity under Emergency Telephone System Act because they acted willfully and wantonly; question of immunity was not relevant because defendants' duties under Act ran to public at large, or to an individual with whom they have assumed a special relationship, but not to each citizen individually);

Chiczewski By & Through Chiczewski v. Emergency Tel. Sys. Bd. of Du Page County, 295 Ill. App. 3d 605, 692 N.E.2d 691 (1997)(Parents and their injured child failed to show that actions of county emergency telephone system board amounted to willful and wanton misconduct as required for board's liability under Emergency Telephone System Act, in action brought by parents and child, arising from misrouting of parent's 911 emergency telephone call to city in which parents and child did not reside);

Harrell v. City of Chicago Heights, Ill., 945 F. Supp. 1112 (N.D. Ill. 1996)(Whether city dispatcher's hesitation in dispatching ambulance to decedent's residence constituted willful and wanton conduct on part of city precluded summary judgment in favor of city, on basis of immunity under Illinois' Emergency Telephone System Act (9-1-1 Act), in wrongful death and loss of consortium action claiming that city's failure to provide prompt emergency service caused decedent's death);

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Vill. of McCook v. Illinois Bell Tel. Co., 335 Ill. App. 3d 32, 780 N.E.2d 335 (1st Dist., Fourth Div. 2002) (State Emergency Telephone Systems Act did not provide for private right of action for enforcement of telephone companies' statutory obligation to collect and remit surcharge amounts, and thus village's breach-of-contract claim against telephone company was impermissible attempt to enforce Act);

City of Chicago v. Illinois Commerce Comm'n, 294 Ill. App. 3d 129, 689 N.E.2d 241 (1st Dist., Fourth Div. 1997)(Neither Emergency Telephone System Act (ETSA) section authorizing Illinois Commerce Commission to assist local government to obtain financial help to establish 9-1-1 emergency telephone service, ETSA section mandating that Commission establish and review technical and operational standards for development of local emergency telephone systems, nor Public Utilities Act (PUA) authorized Commission to adopt regulations exempting users of telephone central switching service from payment of full surcharge rates which local governments charged to fund 9-1-1 emergency telephone systems; local government surcharge section of ETSA did not grant Commission authority to regulate anything, and ETSA did not expressly authorize Commission to oversee how surcharge was assessed);

JLR Investments, Inc. v. Vill. of Barrington Hills, 355 Ill. App. 3d 661, 828 N.E.2d 1193 (2d Dist. 2005)(Section of the Emergency Telephone System Act, requiring county's emergency telephone system board and chairman of county board in any county implementing a 911 system to ensure that all areas of the county are included in the system, did not require reassignment of sectors on towers for wireless 911 system from village to county, in the event certain property was disconnected from village and connected to county).

In *Hoover Telecommunications Dist. v. BellSouth Telecommunications, Inc.*, 712 So. 2d 1095 (Ala. Civ. App. 1997), under Alabama's Emergency Telephone Service Act, a city emergency communication district, rather than a county emergency communication district, had the right to receive emergency telephone service charge revenues which a telephone local exchange carrier (LEC) collected from residents of a subdivision that the city had annexed and that had been located in the county district. The county district was transferring calls from the subdivision residents to the city district, the city district and the city were providing emergency services to the subdivision residents without receiving service charge revenues generated by those residents, and the county district was receiving revenues without providing emergency services to subdivision residents. The court also stated that the city emergency communication district and the city had a duty to provide the same emergency services to residents of the subdivision which the city had annexed as they provided to all other city residents.

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Responses by a county sheriff to questions from constituents regarding a county's 911 emergency telephone service were closely related to the *duty* of the sheriff's office of providing dispatch services for emergency calls from county residents, and thus were absolutely privileged and could not form the basis of a defamation action by a telephone company to which the sheriff referred in his responses. *Redwood County Tel. Co. v. Luttmann*, 567 N.W.2d 717 (Minn. Ct. App. 1997).

II. Assuming Winnebago County has a legal duty to provide 911 services to the municipalities within the County, other than the City of Rockford, does the County have the power to impose a fee or charge on the municipalities for such services?

The governing statutory provisions, in the Emergency Telephone System Act, 50 ILCS 750, are silent on the issue of the County and its ETSB imposing a fee or charge on other municipalities for providing emergency call services. Neither do other pertinent documents, such as State regulations, the approved Plan and Order relating to the ETSB, and the Intergovernmental Agreements, expressly authorize the County ETSB to impose such fees or charges.

At the same time, the ETSA does provide a funding source and funding mechanism for the operation of the PSAPs (Public Safety Answering Points), in the form of surcharges placed on telephone land lines and cell phones. See 50 ILCS 750/15.3, 750/15.3a, 750/35. Similarly, the court held in *City of Bangor v. Penobscot County*, 2005 ME 35, 868 A.2d 177, that a county was authorized to fund its regional 911 dispatch center, and its dispatch services, through county taxes, rather than fee-for-service agreements with participating municipalities, pursuant to a statute regulating law enforcement communications centers.

According to the Illinois Constitution, counties and municipalities which are not home rule units shall have only powers granted to them by law and several other broad categories of enumerated powers that are not relevant here. Ill. Const. art. VII, § 7. Winnebago is such a non-home rule county.

A county is a mere creature of the State and can exercise only the powers expressly delegated by the legislature, or those that arise by necessary implication from expressly granted powers. *Heidenreich v. Ronske*, 26 Ill. 2d 360, 187 N.E.2d 261 (1962); *Inland Land Appreciation Fund, L.P. v. County of Kane*, 344 Ill. App. 3d 720, 800 N.E.2d 1232 (2d Dist. 2003). Likewise, county boards may exercise only such powers as are expressly granted by the state, arise by implication from those granted powers, or are indispensable to the purpose of their existence. *Crumpler v.*

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Logan County, 38 Ill. 2d 146, 230 N.E.2d 211 (1967). Here, there is no express legislative grant of power to the County to impose the fees on the municipalities for 911 service. Nor can it be said that such a power is necessarily implied in the expressly granted powers, because the pertinent legislation provides for a different funding source for such services, that is, the surcharges placed on telephones and cell phones. The powers of the units of local government in the State, including counties, are not to be enlarged by liberally construing the statutory grant, but, quite to the contrary, are to be strictly construed against the governmental entity. *Inland Land Appreciation Fund, L.P. v. County of Kane*, supra, 344 Ill. App. 3d at 724, 800 N.E.2d at 1236. The required strict construction of the County's powers regarding the provision of 911 services weighs heavily against concluding that the County can impose charges or fees not authorized by the most relevant state statute, the ETSA.

By close analogy, an emergency dispatching service that was made up of member police and fire agencies within an Illinois county, including a fire protection district, could not assess on the district's behalf fees that the district lacked authority to assess on its own, for fire alarm and signaling services. *ADT Sec. Servs., Inc. v. Lisle-Woodridge Fire Prot. Dist.*, 724 F.3d 854 (7th Cir. 2013).

A Cook County solid waste and recycling ordinance, which imposed regulations, operational requirements, and fees on operators of county-based solid waste and recycling facilities, pertained to the county's power to regulate for the health, safety, and welfare of its residents, and thus, the county was within its *home rule* authority when it enacted the ordinance. The nature of the problem was management of waste within the county, the county sought to address public health risks that operations of solid waste and recycling facilities posed to county residents, the county had a most vital interest in determining the solution, and the Solid Waste Planning and Recycling Act delegated waste management responsibilities to the county. *Nat'l Waste & Recycling Ass'n v. County of Cook*, 2016 IL App (1st) 143694, 55 N.E.3d 163, *appeal denied*, 60 N.E.3d 875 (Ill. 2016). In contrast with *Nat'l Waste & Recycling Ass'n*, in the instant case Winnebago County does not have broad home rule authority and, as mentioned, the ETSA does not grant the County the power to impose the fees under consideration.

In *City of Cut Bank v. Glacier County*, 270 Mont. 355, 891 P.2d 1174 (1995), a city brought an action seeking to require a county to continue to make its dispatch service available to the city at no charge. The statutory scheme pursuant to which the county sheriff's office dispatch was designated as a "public safety answering point" for the county did not require the county to pay for dispatch services to a city within the county; although the scheme enabled agencies with common boundaries to make agreements that would provide emergency service, it did not

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require an agency to provide free dispatch service to another entity that shares a common boundary. By contrast, the statutory scheme in Illinois does require the County in this case to provide emergency call services to Loves Park and the other municipalities, and that scheme does not provide authority for the County to impose a fee or charge on the municipalities.

In addition, an alleged "Agreement" submitted by the city in *City of Cut Bank* in support of its claim that the county was obligated to provide free dispatch service to the city was not a binding contract. *City of Cut Bank v. Glacier County, supra*, 270 Mont. at 358-59, 891 P.2d at 1176. The document was labeled "application" and was a proposed final plan to be sent to the state for approval of the county emergency telephone system, and there was no indication that state approval had ever been obtained. There are no such defects in the contracts at issue here, none of which authorize the County to impose fees or charges on the municipalities.

The instant case, in light of Illinois' ETSA and other relevant documents, is likewise distinguishable from a case such as *City of Frisco v. Comm'n on State Emergency Commc'ns*, No. 03-08-00579-CV, 2009 WL 1980932 (Tex. App. July 9, 2009)(Memorandum Opinion)(A trial court properly declared that once a city withdrew from a state's emergency communications system, the Commission on State Emergency Communications could continue to assess a land-line service fee on the city's residents. The plain language of the exclusionary provision of the state's health and safety code addressing the land-line fee excepted only the residents of non-participating communities with preexisting systems, or "emergency communication districts" (ECD), from paying the fee. There was no dispute that the city was not an ECD, and none of the language in the provision excepted home-rule municipalities, such as the city, or any other entities that were not ECDs.)

The County may contend that, based on basic fairness or application of equitable principles, it should be permitted to impose a fee or charge on the municipalities benefitting from the 911 services, notwithstanding what the ETSA and other sources of law say or don't say. An effective counter-argument to such a contention is that equity cannot be used to confer upon a local government entity powers that are without legal authorization. *HTK Mgmt., L.L.C. v. Rokan Partners*, 139 Wash. App. 772, 162 P.3d 1147 (2007)(city transportation authority); *see also City of Rochelle v. Stocking*, 336 Ill. App. 6, 82 N.E.2d 693 (2d Dist.1948)(Fact that transaction whereby city advanced money to failing bank and received a note from individual was *ultra vires*, and fact that more than eleven years had elapsed since maturity of the note, were not sufficient to authorize city to resort to equity and to seek recovery of such money from individual on theory that there was a breach of a constructive trust).

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Equity must follow the law. *Adams v. Employers Ins. Co. of Wausau*, 2016 IL App (3d) 150418, 49 N.E.3d 924, *appeal denied*, 50 N.E.3d 1138 (Ill. 2016). In other words, wherever the rights of parties are clearly defined and established by law, as is the case here, equity has no power to change or unsettle those rights. *In re Bauman*, 535 B.R. 289 (Bankr. C.D. Ill. 2015). Equity cannot be invoked to destroy or supplant a legal right. *Stuewe v. Lauletta*, 93 Ill. App. 3d 1029, 418 N.E.2d 138 (1st Dist., 5th Div.1981). The legal rights here are those supplied by the relevant statutes, ordinances, Plan, Order of the Illinois Commerce Commission, and intergovernmental agreements.

If the County were to take the position that Loves Park and the other municipalities should be equitably estopped from opposing or declining to pay the challenged fee for 911 services, there is an effective counter-argument for the municipalities. Equitable estoppel may apply against municipalities only in extraordinary and compelling circumstances. To apply equitable estoppel against a municipality, a plaintiff must plead specific facts that show (1) an affirmative act by either the municipality itself or an official with express authority to bind the municipality; and (2) reasonable reliance upon that act by the plaintiff that induces the plaintiff to detrimentally change its position. *Vaughn v. City of Carbondale*, 2016 IL 119181, 50 N.E.3d 643.

This is not such an "extraordinary and compelling" set of circumstances as can justify applying the doctrine of equitable estoppel against the municipalities. Moreover, Loves Park and the other municipalities arguably have not taken any such affirmative act which could bind them to pay the challenged fee, and therefore there has been no reasonable reliance by the County, and detrimental change in position, based on such actions.

In addition, when public revenues are at stake, estoppel against a municipal corporation is particularly disfavored. *Patrick Eng'g, Inc. v. City of Naperville*, 2012 IL 113148, 976 N.E.2d 318. Clearly public revenues of Loves Park and the other municipalities are at stake here, should they be forced to pay a fee to the County for 911



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9-1-1 Call Routing and Transfers

The call routing mechanisms in 9-1-1 systems utilize the caller's location to determine the 'best' Public Safety Answering Point (PSAP) to route the call to, which is most typically the PSAP responsible for dispatching law enforcement service to that caller's location (the majority of calls to 9-1-1 are typically law enforcement related). This so-called Primary PSAP (Primary in that they are the first point of answering the 9-1-1 caller) is then responsible for confirming the location of the incident (the caller's location is not always the location of the incident) and processing this information in their Computer Aided Dispatch (CAD) system so the appropriate units can be dispatched.

It is not uncommon for the incident location or the incident type to require the further involvement of an additional PSAP that may be responsible for dispatching other public safety agencies. Transferring the caller to this so-called Secondary PSAP (Secondary in that they are receiving the call from the Primary PSAP rather than directly from the caller) is accomplished over the 9-1-1 network and system equipment, creating a highly reliable transfer mechanism and allowing the call receiver at the Secondary PSAP to have access to all of the 9-1-1 caller and location information associated with the call. These transfers are quick to perform and highly reliable, consistent with the entire 9-1-1 system architecture.

It is also not uncommon to have more than a single PSAP serving a single geographical area. Sometimes the distinction between PSAPs is the geographic area being served or the combination of agencies being served, while sometimes the distinction is between the law enforcement and fire/emergency medical domains. Some 9-1-1 systems establish more than one PSAP to increase their ability to provide backup and workload balancing during periods of peak call volumes (like during a major incident or storm situation). Regardless of the reason, multiple PSAPs are well accommodated in the 9-1-1 system architectures, call transfers between PSAPs are an everyday occurrence, and these transfers take place in a highly reliable and expedient manner when they are done within the 9-1-1 system.

The two Primary PSAPs in Winnebago County are in an enviable position, since both are part of a shared 9-1-1- telephone system and both operate on a common CAD system. With this technology configuration in place, it is possible to establish a variety of call answering, CAD entry and dispatch protocols between the PSAPs and the agencies they serve. For example:

1. If the PSAP first-receiving the call determines that the incident type or location is more appropriately handled by the other PSAP, they can simply and quickly transfer the caller within the 9-1-1 system to the other PSAP. If there is a sense that the incident may also require a response by an agency served out of the first-answering PSAP, they can stay bridged on the line to gather further information from the caller concurrent with the other call receiver.
2. Alternatively, the PSAP first-receiving the call could handle the call processing and CAD entry directly. This would eliminate the need for transferring the caller. It is not uncommon for communications centers on shared CAD systems to enter calls directly at the point the call is received regardless of whether the incident will actually be dispatched by the same PSAP that received the call. This 'virtual

consolidation' of the two PSAPs results in highly efficient call receiving and CAD entry, while also creating surge and backup capacity within the overall system.

In either of the above operational concepts, the key to success is having both PSAPs operating on the same 9-1-1 telephone system and the same CAD system. This capability already exists with the two PSAPs in Winnebago County. IXP has worked with many regions that aspire to achieve what Winnebago County already has in place.



Appendix 3 – Legal Considerations

A consortium of municipal mayors and police chiefs representing the communities that receive law enforcement dispatch services from the County PSAP contacted a legal firm to provide representation in their discussions with the County. The group provided MCP with an executive summary and position paper during our onsite meeting. This executive summary outlines legal research and findings pursuant to Illinois law as it relates to the two legal questions presented below. Overall, research indicated that the County cannot immediately (and by itself) discontinue the present circumstances concerning the provisioning of 911 services, because the County has a duty to ensure that all 911 calls within the County are handled. Further, there is no express power given to the County to impose a fee or to otherwise charge for dispatching services. These conclusions were drawn from examining statutes, the Winnebago County Plan (the Plan), and intergovernmental agreements (IGAs).

1. Analysis

1.1. Legal Question 1:

Does the County have a legal duty to provide 911 services to the municipalities within the County, other than the City of Rockford, including not only answering and transferring calls, but also the dispatching of emergency assistance from a first responder?

Although legal research did not provide a conclusive answer, an argument can be made that the County has a duty to provide full 911 services, including the provisioning of dispatch services to the municipalities within the county. In forming this argument, the *Emergency Telephone System Act* (ETSA), court decisions, the Plan, and IGAs between the County and municipalities were examined. It was found that repeated references were made to the dispatching components of 911 services being among the County's functions and responsibilities. For example, Winnebago County submitted the Plan in October 1990 to the Illinois Commerce Commission. The Plan's cover letter states that "callers will be interrogated, and the proper police, fire, or EMS responses required will be dispatched." In addition, the narrative states that the public agencies decided to "subscribe for dispatching service from one central dispatch center."

In November 2005, an IGA for the operation and funding of the Winnebago County Emergency Telephone System was entered into by the City of Rockford and the County Emergency Telephone Systems Board (ETSB). A "whereas" clause in the agreement describes the desire of the parties to split "call-taking responsibilities," with the City receiving and dispatching all 911 calls originating in the City" ... and the County receiving and dispatching all calls originating within Winnebago County but outside the City of Rockford. Another "whereas" clause states that the ETSB used its revenues to build facilities to equip them "for PSAP and dispatch functions only."

1.2. Legal Question 2:

Assuming Winnebago County has a legal duty to provide 911 services to the municipalities within the county, other than the City of Rockford, does the County have the power to impose a fee or charge the municipalities for such services?

Governing statutes, pertinent documents, the Plan, and IGAs were found to be silent on the issue of the County and its ETSB imposing a fee or charging other municipalities for providing emergency call services (i.e., there is no express power given to them). However, the ETSA does provide a funding source and mechanism for the operation of the PSAPs in the form of surcharges placed on telephone landlines and cell phones. In this regard, the County may argue that based on a principal of basic fairness, it should be permitted to impose a fee or charge the municipalities benefitting from the 911 services, notwithstanding what the ETSA or other laws say. However, when the rights of parties are set forth clearly under the law, “fairness” has no bearing to modify those rights. Therefore, as there is no legal authorization, no fee can be imposed. Moving forward, any changes from the present circumstances regarding how 911 calls are handled or how they are paid for in Winnebago County must be amended by the appropriate legal process.

1.3. Opinion Summary

1.3.1. Background

An opinion was provided to Chief Derek Bergsten, Chairman of the Winnebago County ETSB by attorney John H. Kelly regarding the ETSB’s responsibilities regarding 911 dispatch and the use of surcharge funds. This opinion was in direct response to a May 2018 memorandum on 911 call handling in Winnebago County.

1.3.2. Issue

The memorandum raised two issues: (1) Is Winnebago County’s ETSB legally required to dispatch emergency assistance from first responders for all municipalities and fire districts within the county in addition to providing 911 call-answering services; and (2) Does Winnebago County or the ETSB have the legal authority to charge for the delivery of public safety dispatch services?

1.3.3. Analysis

It appears that (1) Illinois law does not mandate that the ETSB provide dispatch services for all public safety entities in the county and (2) Illinois law does allow the charging of fees for dispatch service.

Regarding the first issue, the definitions of “System” and “911 System” as provided in the ETSA empowers the ETSB to operate and maintain a 911 system in the county and to provide for the answering of 911 calls, as well as the routing of those calls to PSAPs for processing and dispatch. The ETSA also specifies a definition for “Direct Dispatch,” which is a 911 service that provides direct dispatch by a PSAP telecommunicator of the appropriate unit upon receiving an emergency call and deciding the proper action

to be taken. This reflects a distinction between the ETSB's duty to maintain the 911 system and the provisioning of dispatch services for the public safety agencies in the county.

The second issue concerns the ability of the County (or alternatively another entity) to charge for the provisioning of dispatch service. Currently, the ETSB collects surcharge fees from telephone service subscribers, and this provides the funding source for 911 call-handling and dispatch (highlighting that these are two separate concepts). Due to this fact, it is clear that this removes the need to charge for dispatch service. Further, the Illinois Attorney General issued an opinion in 1998 that concluded that dispatchers should be paid from sources other than surcharge funds when not answering 911 calls.

The opinion in response to this question contained four points that MCP considered during this study:

- A "911 system" and a "dispatch operation" are separate concepts
- 911 surcharge funding can be used for a 911 system
- Separate funding should be used to fund a dispatch operation
- Units of local government and "creatively established consolidated dispatch centers throughout Illinois" are imposing fees for dispatch operations.

1.4. Conclusion

The opinion provided to Chief Derek Bergsten by ETSB legal counsel and the executive summary, provided by the municipal consortium on 911 call-handling in Winnebago County both raised important legal issues, points of law, and analysis. Whereas the executive summary inferred that the County has a duty to ensure that all 911 calls within the county are handled, including the dispatching of emergency assistance, and that there is no power to impose fees, the opinion maintains that Illinois law does not mandate that the ETSB provide dispatch services for all public safety entities in the county and the law does allow the charging of fees for dispatch service.

Because these two examinations reached differing conclusions on the legal issues presented, the executive summary on 911 call-handling does mention that because there is no conclusive Illinois case law on the dispatching issue and the law is silent regarding the power to impose fees, their determination is not clear-cut, leading to room for interpretation. Because the opinion seems grounded in more legal certainties, it appears plausible that the conclusions reached can be applied to 911 call-handling in Winnebago County. Moving forward, any changes from the present circumstances regarding how 911 calls are handled, or how they are paid for, in Winnebago County must be amended by the appropriate legal process (e.g., brought forth before an administrative law judge).