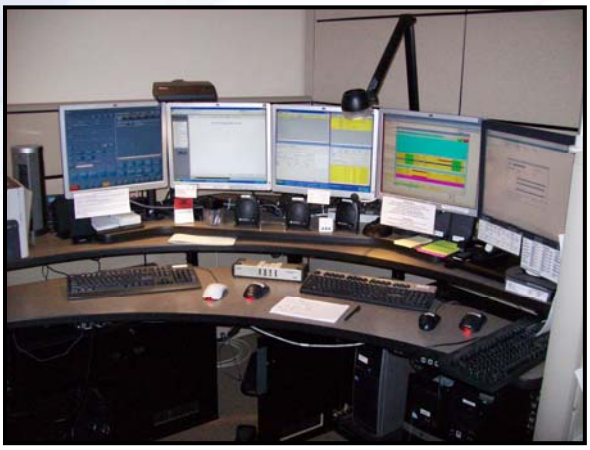

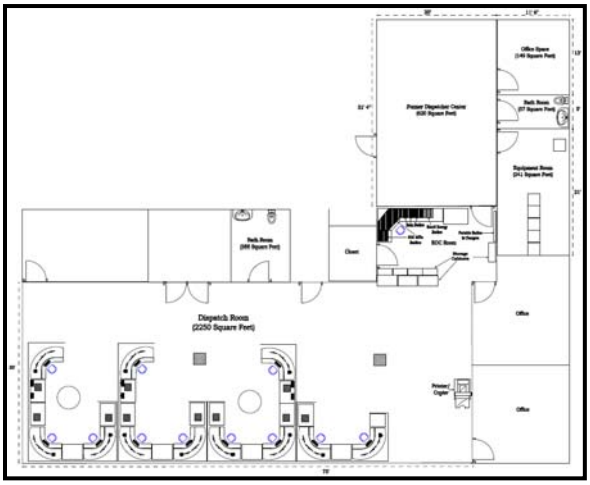

SE MINNESOTA

PSAP CONSOLIDATION STUDY PROJECT

SE Minnesota Regional Radio Board
SEH No. SMRRB 115592

May 2012

SEH INC.
3535 Vadnais Center Drive
St. Paul, MN 55110

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May 10, 2012

RE: SE Mn Regional Radio Board
SE Mn PSAP Consolidation Study Project
- Findings and Recommendations
SEH No. SMRRB 115592 14.00

Sheriff Scott McNurlin
Chair, SE Mn PSAP Study Group
Goodhue County Sheriff's Office
430 W. 6th St.
Red Wing, Mn 55066

Dear Sheriff McNurlin:

In May, 2011 the Southeast Minnesota Regional Radio Board contracted with SEH to work with the SE Mn PSAP Consolidation Advisory Committee. Our task was to study the potential for creating new regional models for PSAP operation and management by combining the 10 current PSAPs that operate in the 11 county southeast Minnesota region. The PSAP Consolidation Study project goals were to determine if some form of PSAP restructuring could be done that maintains or improves the level of service while reducing costs.

The project team established a three phase work plan to explore PSAP consolidation that consisted of an Analysis and Feasibility Report phase, an options development and Business Plan Report phase, and an Implementation Plan Report phase. The intent of these report documents is to provide the Study Group members with information needed for decision making regarding the number, location, and design of future PSAP(s) operated in southeast Minnesota. The reports along with this Findings and Recommendations letter provide the basis for future development of policies, funding decisions, and system operations planning for PSAP Consolidation in the region.

In short, the consultant team believes that the three PSAP business model is best suited to accomplish the goal of improving PSAP services and reducing costs within the region. The current 10 PSAPs operate with a combined staffing compliment of 128 FTE positions and an ongoing annual cumulative operations cost of $ 9.26 million. We believe a 3-center PSAP model can be created to provide a higher level of service with 100 FTE positions and an estimated annual cumulative operations cost of $ 8.53 million. The facility and technology migration cost to create these three new regional centers is estimated at $ 5.15 million, which could provide for a financial breakeven payback period of seven years. The 3-center PSAP configuration would include an I-35 Corridor Center with Rice, Steele, and Freeborn Counties; a Mississippi River / Hwy 61 Corridor Center including Goodhue, Wabasha, Winona, and Houston Counties; and Central Region / Hwy 52 / I -90 Corridor Center including Dodge, Olmsted, Fillmore and Mower Counties.

Below are some of the key findings from the project reports along with recommendations for next steps to move the region toward a consolidated PSAP environment.

Key Findings – Detailed Analysis and Feasibility Study Report:

The Detailed Analysis and Feasibility Study Report presents detailed documentation of the current communication center operation, services, technologies, operational costs, staffing levels, service levels, and geographic distribution. Each individual PSAP was visited for data collection interviews, personnel interviews, and facility examination. Follow up information was gathered via telephone, e-mail and additional PSAP Study Group meetings. Some of the key findings from this report include:

- ***Center Operations:*** There is a strong commonality among the current centers that will aid in the potential transition to a consolidated PSAP. Differences in the types and level of services provided from the current centers, differences in common CAD system technology and records management processes, and variations is staffing policies could be obstacles to successful transition and would require careful attention during implementation planning.

- ***Customers:*** Consolidation would likely improve operations in the fire service by eliminating the need for center to center call transfers and the additional coordination often required for response by agencies that serve areas outside their current geographic boundaries. Consolidation may also reduce the number of 911 transfers between PSAPs, which will be a significant issue as the public continues to move to wireless technologies for accessing 911.

- ***Customers:*** Not all current customers or services provided by each individual center would continue to receive service from a consolidated PSAP. Items such as walk up windows, some administrative functions, and jail support services may need to be reengineered within each individual organization.

- ***Staffing, service levels, call volumes:*** There are currently 128 FTE positions operating from the existing 10 centers. Combined they handled over 3.5 million measurable call, radio or CAD tasks in 2010. The centers also support a wide variety of non-measurable agency and customer support activities. Looking at the measureable work load to maintain a public safety grade Quality of Service standard, preliminary analysis predicts that a potential staffing level of between 98 to 112 positions is possible.

- ***Costs / Budgets:*** The analysis of current PSAP expenditures suggests that savings should be achievable in personnel costs, although the actual amount will be dependent on which consolidation scenario(s) are implemented. Total costs will also be impacted by the need to reassign, re-engineer or eliminate the "non-dispatch" tasks. Experience in other consolidations has shown that sharing the purchase, maintenance and support of PSAP core technologies such as Next-Generation 9-1-1 equipment, logging recorders and CAD systems provide the greatest potential for cost savings.

- ***Equipment Capabilities:*** Many of the technology upgrade decisions and financial commitments have recently been made in the region, leaving little opportunity for real savings or economies of scale until some future technology upgrade is needed. However, there are 3 counties that have not made a significant CAD investment so the timing for consolidation may allow for savings in this area compared to each of these counties going it alone. Mobile computing, including AVL becomes a greater necessity in regional PSAPs and is an area that will likely need investment to bring all users up to a common level of capability.

- ***Physical Space / facilities:*** The facility and physical space requirements for the PSAP consolidation can be a major cost consideration and can have a significant impact on the operations of the center. The site assessments identified several locations that present opportunities for expansion of existing spaces to accommodate a consolidated center.

- ***Feasibility of Consolidation – Political/Policy Maker Input:*** Survey responses showed a strong willingness at the leadership level to further consider consolidation of PSAP services. The potential to improve PSAP service levels and efficiencies are the most desired benefits of consolidation, followed by improvement of technology and PSAP capabilities. Reducing on-going operational costs and minimizing the required initial cost outlay to consolidate were also identified as important criteria in determining the success of the consolidated PSAP.

- ***Feasibility of Consolidation – First responders Input:*** Nearly 4 out of 5 first responders indicated that the local knowledge of the service area and a working relationship with first responders was important for dispatchers. The application of technology advancements (CAD, mobile data and records management software, 800MHz radio, AVL and in-vehicle/route guidance) are perceived by the majority to be "necessary" while some thought they were "nice to have". By far the biggest concerns focused on the potential of diminished service due to dispatchers' unfamiliarity with the service area and reduced face to face interactions between dispatchers and responders.

- ***PSAP Consolidation Model(s) Selection:*** Several potential PSAP consolidation models were presented to the PSAP Study Group for consideration. Based on staffing calculations, technology considerations, and geographic alignments; the consultant team and PSAP study group determined that the three consolidation scenarios most suited for further study and business plan development were the 4-center, 3-center, and 2-center configurations.

Key Findings – Consolidation Options and Business Plan Report:

In phase two of the project the PSAP Study Group and consultant team developed the models for a 4-center, a 3-center, and a 2-center PSAP consolidation scenario. The report documents a sample business plan for each of the scenarios that identified the following: geographic alignment of the centers; the customers served; the management and organizational structure with staffing levels; the products and services; technology considerations; facility and space needs; and finally estimated migration and operating costs for each scenario. The plan also addresses various governance and cost sharing model alternatives, and provides some research on possible PSAP funding options. The plan includes some high level preliminary designs for the centers, and explores facility and space availability within the region. Some of the key findings from this report include:

- Staff costs make up the significant portion of ongoing operation costs and are one of the most important elements in determining service levels and cost benefits of consolidation. The staffing recommendations from early modeling and Erlang-C calculation methods were cross referenced and validated using operating PSAPs with similar populations and call volume. The staff modeling method appears accurate and valid for this planning effort. The staffing models developed in this phase determined that the minimum staff levels should be: 4-center PSAP = 112; 3-center PSAP = 100, 2-center PSAP = 100; the current 10-center PSAP model includes 128 FTE staff positions.

- Facility space needs are another significant cost driver in the development of a consolidated PSAP environment. New building construction was ruled out as cost prohibitive for this plan considering current economic conditions and because there are several existing facilities identified as candidates for remodeling to accommodate a consolidated PSAP. Those locations include: Freeborn County (1,911 sq. ft.); Goodhue County (3,545 sq ft.); Olmsted County (New facility plan in process – 3,590 Sq, ft.); Rice/Steele County (4,035 sq. ft.); and Wabasha County (2,010 Sq. Ft.).

- The region can create be reconfigured to create new centers that evenly distribute call volumes and population within the region and maintain adjacencies with neighboring counties. Consolidation scenarios were created for 4-center, 3-center, and 2-center PSAP configurations.

- Cost estimates were developed through the business planning process that included capital costs for facilities and technology improvements (assuming the use of existing city or county spaces), and projected ongoing operating costs based on new staffing models. The results for each scenario studied were presented with straight line capital payback periods as shown in the following table.

# Centers	Staff	Capital Cost	Operations Cost	Delta	Payback
10	128.2	---	$ 9,265,222		
4	112	$ 5,049,375	$ 9,047,796	$ 217,426	23 yrs
3	100	$ 5,145,120	$ 8,526,687	$ 738,535	6.9 yrs
2	100	$ 7,065,710	$ 8,753,948	$ 511,274	13.8 yrs

Key Findings – Implementation Plan Report:

The final phase of the project provides detailed documentation for how to proceed with migration and implementation of a consolidated PSAP project. The report includes a decision matrix that identifies the PSAP performance criteria evaluated to aid in ranking the PSAP consolidation scenario options. The Implementation Plan Report also includes recommended best practices for project management, outlines the roles and responsibilities of various stakeholders in the migration effort, and proposes a project time line of activities for a generalized PSAP consolidation project. Some of the key findings from this report include:

- The project goals were used as metrics for determining the most desirable PSAP configuration. Each of the scenarios studied may meet any individual goal to a higher or lower degree than another configuration. In total the 3-center PSAP scenario ranked highest with a score of 48 followed by the 2-center scenario scoring a 45, and the 4-center PSAP option scoring 41. The current 10 PSAP configuration scored 28 out of the possible 58 points possible.

- Numerous stakeholders will need to be engaged and involved throughout the governance formation, detailed design, and deployment phases of the consolidation effort. Clearly identifying the roles, responsibilities and decision making responsibility assigned to these stakeholders can aid in keeping the project on track and ultimately successful.

- Project risks exist in each stage of the PSAP consolidation migration process. Some particular areas of risk include: maintaining quality of services during and following the transition; providing for agency input in decision making and assuring fair and equitable treatment of participants. Mitigation strategies exist that require project champions to take action and be proactive in addressing concerns and clearly communicating project information.

Recommended Next Steps:

The consultant team recommends the region proceed with development of a 3-center PSAP model to serve the Southeast Region of Minnesota. This is based on the work completed in the Detailed Analysis and Feasibility study, and the Options and Business Planning study portions of this project; along with the numerous project meetings and discussions with the PSAP study group members, We believe the analysis and data developed during this project supports a 3-center PSAP approach as the most viable for success in achieving the goals established by the project team. Ultimately, we understand that each individual county will need to evaluate what model or joint PSAP partnership scenario best meets their needs. There may be other configurations or alignment of centers, and county partnership models and approaches that will develop as a result of this planning effort. However, the analysis contained in these project reports should be used by any county that chooses to proceed with a consolidation project to inform their decision making as they proceed.

Some important considerations for next steps are:

1. Those entities interested in creating a Consolidated PSAP need to make a formal contractual agreement with potential financial commitments to move the project to the next phase. While this will not commit the entity to a consolidation, it will aid in solidifying the PSAP participants and give life to the next planning phase of the project. This will also allow more credence to the discussions that follow, including the formation of a governance structure and cost sharing formula.

2. Select, hire, or assign a dedicated project champion to help lead the effort. Ideally this would be the consolidated PSAP Executive Director or PSAP Manager. This would allow for continuity in planning for, implementing, and operating the new consolidated PSAP. However, if this appointment seems premature to participants at this early stage, it is still essential to dedicate resources to the early tasks needed to give form to the consolidated PSAP Project.

3. Recognize that this PSAP consolidation study effort was not fully inclusive of all potential stakeholders or affected parties of a consolidation. In particular, we recommend that next steps in planning include representatives from fire and EMS agencies, agency human resources staff, and employee bargaining unit representatives.

4. A formal Communications Plan should be developed for any next phase consolidation effort to assure that up to date and accurate information is communicated to the many various constituent groups, including: the public, the media, first responders, elected officials, and current PSAP staff.

5. Consider professional consultant support to continue the detailed planning, design, and organizational tasks associated with the development of a complex multi agency, consolidated PSAP center. The planning and design elements included in this study were high level,

conceptual, and preliminary. Detailed architectural design, communications system design, and organizational planning are required to make the project a reality.

6. Plan for change and uncertainty from the onset. There may be entities that do not commit to joining a center from day one, that ask to participate at some later date. One entity may join from day one, and then decide to leave the center in the future. Technology systems will continue to evolve and change, and staff requirements and service levels will become clearer as the centers become operational and may need adjustment over time. Consider these change elements and others early on in the planning effort and build in flexibility and contingency features into governance, funding, facility, and staffing plans.

SEH appreciates the opportunity to present the SE Mn PSAP Study Group and the SE Mn Regional Radio Board with these findings and recommendations and the attached SE Mn PSAP Consolidation Study Project final report documentation package. It has been our pleasure working with the Study Group. This Findings and Recommendations letter will serve as the overall project executive summary. Please feel free to contact me if you or any members of the Study Group or RRB have any concerns or questions. I would be glad to discuss the details of this Findings and Recommendations letter, or any of the other project reports or documentation.

Sincerely,

SHORT ELLIOTT HENDRICKSON INC.

Andrew W. Terry, PE
Project Manager

awt

c: SE Mn PSAP Study Group
SE Mn Regional Radio Board

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Phase I Report - Detailed Analysis and Feasibility Study

Southeast Minnesota PSAP Consolidation Study

For the Southeast Minnesota Regional Radio Board

SEH No. SMRRB 115592

May 2012

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Southeast Minnesota PSAP Consolidation Study
Phase I Report - Detailed Analysis and Feasibility Study
For the Southeast Minnesota Regional Radio Board

SEH No. SMRRB 115592

May 2012

Prepared by Short Elliott Hendrickson Inc.

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Phase I Report - Detailed Analysis and Feasibility Study

Southeast Minnesota PSAP Consolidation Study

Prepared For the Southeast Minnesota Regional Radio Board

1.0 Executive Summary

This is an assessment of the issues related to restructuring (consolidating, realigning and/or combining operations into regional centers) the 10 PSAPs currently operated in the 11-county region of Southeast Minnesota. The impact that restructuring would have on the cost of operating the PSAPs was examined. The question of whether any proposed restructuring would provide operational efficiencies and/or improve the delivery of services to the public was also examined.

This document reports the results of this preliminary investigation into the potential benefits associated with undertaking PSAP consolidation. All factors associated with the project were studied to determine if the investment of time and other resources will yield a desirable result.

The various elements relative to the existing 10 PSAP centers were examined including communication center operation, services, technologies, operational costs, staffing levels, service levels, and geographic distribution.

Initially, a project orientation presentation was made to the PSAP Study Group. Each individual PSAP was visited for data collection interviews, personnel interviews, and facility examination. Follow up information was gathered via telephone, e-mail and additional PSAP Study Group meetings.

Each of the current 10 PSAPs has a unique character, set of customers, and individualized operating environment. However, there are also many common operating parameters and functions that are shared by all of the centers in the region. The following summarizes the findings as detailed in the following sections of the document.

Center Operations: There is a strong commonality among the current centers that will aid in the potential transition to a consolidated PSAP. Differences in the types and level of services provided from the current centers, differences in common CAD system technology and records management processes, and variations is staffing policies could be obstacles to successful transition.

Customers: Each of the existing centers currently serves multi- agencies and multiple jurisdictions. Transitioning to a consolidated PSAP would simply expand on the current geographic foot print of a center. Consolidation would likely improve operations in the fire service by eliminating the need for center to center call transfers and the additional coordination often required for response by agencies that serve areas outside their current

geographic boundaries. Not all current customers or services provided by each individual center would continue to receive service from a consolidated PSAP. These services and customers need to be identified and planned for through the business planning process to assure that alternate methods or providers are identifies for each of the customers or services not incorporated into a consolidated PSAP plan.

Staffing, service levels, call volumes: There are currently 128 fulltime equivalent positions operating from the 10 centers in South East Minnesota. Combined they handled over 3.5 million measurable call, radio or CAD tasks in 2010. The centers also support a wide variety of non-measurable agency and customer support activities. Looking at the measureable work load to maintain a public safety grade Quality of Service standard preliminary analysis predicts that a potential staffing level of between 98 to 112 positions is possible depending on the consolidation scenario deployed. There are a large number of common services provide from the current PSAPs that can be consolidated. That said, some services are not conducive to being supported or provided from a new consolidated center. At least some current staff positions will likely need to be retained at existing sites or some form of task and service reengineering will be needed to accommodate those services not incorporated into a consolidated operation.

Costs / Budgets: Numerous factors play into developing costs and budgets for a consolidation effort. Using data supplied by the current PSAP operations a base line can be established. Cost should be a serious factor in determining the direction but it should not be the overall driving force. Cost savings may be realized in the long-haul but improved efficiency and level of service can usually be achieved early in the consolidation process. The analysis of current PSAP expenditures suggests that savings should be achievable in personnel costs, although the actual amount will be dependent on which consolidation scenario(s) are implemented. The business plan will provide a more detailed analysis of projected operational costs for each scenario. Total costs will also be impacted by the need to reassign, re-engineer or eliminate the "non-dispatch" tasks, such as records entry, lobby service, vehicle impound releases, etc., currently performed by dispatchers in several centers. Experience in other consolidations has shown that sharing the purchase, maintenance and support of PSAP core technologies such as Next-Generation 9-1-1 equipment, logging recorders and CAD systems provide the greatest potential for cost savings.

Depending upon consolidation scenario(s) and governance structure, the consolidated PSAP may need to budget for certain support costs, which are not included in many of the current PSAPs budgets. Facility management, human resources, legal and fiscal services are often not included in agency-hosted PSAPs but must be accounted for in the consolidated PSAP.

Equipment Capabilities: There are four significant technology considerations, with potential cost implications, to consider in the PSAP consolidation planning effort: E-911 phone audio logging; radio system and console equipment, CAD and records management software tools, and mobile computing capabilities. Of these four key technology considerations the region is well positioned in 3 of the 4 areas to allow some form of technology consolidation. For the E-911 issue, opportunities exist for cost savings and platform standardization because many of the counties have not yet made upgrade investments. The radio system and console equipment area is for the most part standardized on the ARMER backbone with Motorola console equipment. Although the CAD environment is not standardized in the region, the CIS platform does serve 5 of the 11 counties. There are also 3 counties that have not made a significant CAD investment so the timing for consolidation may allow for savings in this area compared to each of these counties going it alone. The mobile computing / AVL environment

is one area that will likely need significant investment to bring all users up to a common level of capability and also has a significant impact on the potential for service level improvements for dispatch and emergency responders in the region.

Physical Space / facilities: The facility and physical space requirements for the PSAP consolidation can be a major cost consideration and can have a significant impact on the operations of the center. The site assessments identified several locations that present opportunities for expansion of existing spaces to accommodate a consolidated center. Planning for a new PSAP facility or expansion of an existing center should consider all aspects of the facility including the building site, the location within the region, security and access, center layout, utilities and redundant systems, etc. Once consolidation models are established that identify the alignment of the counties within the region and the staffing requirements of each PSAP consolidation scenario, more detailed planning regarding facility space and location needs can be done.

Feasibility of Consolidation – Political/Policy Maker Input: Overall there seems to be significant support for some form of consolidation. Survey responses showed a strong willingness at the leadership level to further consider consolidation of PSAP services, and also revealed that the physical location of the consolidated PSAP is not a significant factor in a decision to participate. Less than a third of respondents indicated that they were considering hosting the consolidated PSAP and the vast majority said that if financial and governance issues are acceptable they would participate no matter where the PSAP is located. Constituent approval was cited as a must by about 24% of respondents, but more than half said they would proceed if the consolidation makes fiscal and operational sense.

The potential to improve PSAP service levels and efficiencies are clearly the most desired benefits of consolidation, followed by improvement of technology and PSAP capabilities. Reducing on-going operational costs and minimizing the required initial cost outlay to consolidate were also identified as important criteria in determining the success of the consolidated PSAP.

An independently operated PSAP organized as a joint powers entity was the preference of over 64% of respondents, with 13% preferring a PSAP run by a single agency that serves other jurisdictions on a fee-for-service basis. Staff accommodation preferences were more evenly divided, with 44% favoring retention of all incumbent staff and 34% favoring staffing the new PSAP as appropriate and letting each agency determine the disposition of current staff.

While the survey revealed clear preferences in many of the key consolidation topics, it also revealed strongly held opinions in dissent of the majority views. If the process is to move forward, it will be crucial to develop decision making processes that acknowledge all points of view and define the process for making higher level governance and policy decisions.

Feasibility of Consolidation – First responders Input: As may be expected, there is much more reluctance to change from the first responder community. However, 45.9% of first responders indicated that their PSAP service is not multi-agency, in spite of the fact that all PSAPs in the study area are currently multi-agency. This may be due to the fact that most counties in the study area moved to county-wide dispatch services prior to the employment of most current responders. The application of some technology advancements (CAD, mobile data and records management software, 800MHz radio, AVL and in-vehicle/route guidance) are perceived by the majority to be “necessary” while some thought they were “nice to have”. By far the biggest concerns focused on the potential of diminished service due to dispatchers’

unfamiliarity with the service area and relationships. Nearly 4 out of 5 first responders indicated that the local knowledge of the service area and a working relationship with first responders was important for dispatchers. These respondents indicated that local knowledge and responder familiarity in the consolidated PSAP could be improved with technology such as mapping, AVL and CAD (63%), additional dispatcher and responder training (69%) increased staffing levels in the PSAP (65%) and other measures such as dispatch ride-alongs. There were also concerns related to staffing, overall level of service, training or lack thereof, accountability, chain of command to list a few. Even with this somewhat anti-consolidation sentiment, there is a thread that given the right transition process and addressing concerns that consolidation may indeed be workable.

PSAP Consolidation Model(s) Selection: Several potential PSAP consolidation models have been presented to the Southeast Minnesota PSAP Study Group for their consideration. To move to the PSAP consolidation options recommendations phase (Phase 2) of this project, decisions will need to be made regarding specific model(s) that will be further analyzed. Based on the final outcome of Phase 2 then it is intended to move into the PSAP consolidation implementation plan phase (Phase 3) or business plan phase of this project.

2.0 Introduction

The purpose of the SE Minnesota Regional Public Safety Answering Point (PSAP) Consolidation Study is to:

- Proceed with a three phased work program that includes a detailed analysis and feasibility study phase (Phase 1), a PSAP consolidation options recommendations phase (Phase 2), and a PSAP consolidation implementation plan phase (Phase 3).

The overall goal of this project is to conduct an assessment of the issues related to restructuring (consolidating, realigning and/or combining operations into regional centers) the 10 PSAPs currently operated in the 11-county region. The project includes a requirement to examine the impact that restructuring would have on the cost of operating the PSAPs and identify and examine whether any proposed restructuring will provide operational efficiencies and/or improve the delivery of services to the public and the public safety agencies serving them.

This analysis and feasibility study is a preliminary investigation into the potential benefits associated with undertaking PSAP consolidation. The main purpose of this analysis and feasibility study is to consider all factors associated with the project, and determine if the investment of time and other resources will yield a desirable result.

Below are some reasons to conduct an analysis and feasibility study.

- Gives focus to the project and outline alternatives,
- Narrows alternatives,
- Identifies opportunities through the investigative process,
- Identifies reasons not to proceed,
- Enhances the probability of success by addressing and mitigating factors early on that could affect the project,
- Provides quality information for decision making,
- Provides documentation that the project was thoroughly investigated,
- Helps in securing potential funding.

A successful PSAP consolidation effort typically strives for at least some of the following major benefits:

- Ongoing operational cost savings,
- Operational efficiency,
- Improved level of performance and service,
- Enhanced technology.

This analysis and feasibility study is a critical step in the PSAP consolidation assessment process.

2.0 - Introduction: Analysis / Feasibility NOTE: Each subsequent section of this report will conclude with a highlighted section including analysis of the topic and potential considerations for PSAP consolidation feasibility.

3.0 Analysis of Current Conditions

This section of the report looks at and documents the various elements relative to the existing 10 PSAP centers. This includes communication center operations, services, technologies, operational costs, staffing levels, service levels, and geographic distribution.

3.1 Site Assessment process, interviews and site inventories:

SEH began the Consolidation project with a project orientation presentation to the PSAP Study Group followed by individual site visits to each PSAP for data collection interviews, personnel interviews, and facility examination. Subsequent information was gathered via telephone, e-mail and additional PSAP Study Group meetings.

Some general notes and feedback from these site assessment visits are listed here. More complete site assessment summary reports and feedback comments are included in Appendix A and B of this report.

The following comments were taken during interview meetings and are representative of feedback received during the interview sessions. Participants were asked to comment in general about PSAP consolidation and list items where there were potential for benefit or improvements due to consolidation and areas of concern or potential draw backs from consolidation.

Some potential improvements or benefits sited include:

1. Cost Savings, sharing of technology and expenses
2. Standard platforms, sharing neighbor's assets
3. ARMER system has the benefit of shared technology
4. Possible work load sharing, share dispatching on off hours (dog watch sharing), help with staffing when employees call in sick, vacation, etc.
5. Interoperability among counties and cities that participate
6. Better records and information sharing

Some possible drawbacks or areas of concern sited include:

1. Lose control of your own center, community rapport, loss of personal touch
2. Concern for service levels
3. Cost savings need to be a substantial to justify - Public will have to be reeducated and be assured of a level of service
4. Loss of jobs, potential to relocate workers is a problem, labor issues with unions, difference in staffing wages
5. Some jobs cannot be eliminated due to additional non dispatch duties
6. Many Counties are interested in consolidation but only if they can host - domain control (in favor only if it's at my PSAP), difficult to give up the current investment in the dispatch center
7. Up front capitol costs and how long to recoup, how to balance and distribute costs among participating counties

In addition to these comments a full listing of interview responses is included in Appendix B.

3.2 Current Center Operations

As would be expected, each of the current 10 PSAPs has a unique character, set of customers, and individualized operating environment. However, there are also many common operating parameters and functions that are shared by all of the centers in the region. As is the case with all of these PSAPS, to be considered an official PSAP in the State of Minnesota you must operate as an E-911 call answering point with 24 hour per day, 365 day per year coverage.

For 9 of the 10 centers, they operate a single stage dispatch operation. Single stage dispatch operation is where the E-911 call taker also provides the emergency radio dispatch function. This type of operation is typical of rural PSAPs where it is common to have a single dispatcher or two dispatchers on duty at a time. Often, centers with more staff on duty and those with higher E-911 call volumes will operate a two stage dispatch operation where one operator position will be dedicated to answering E-911 calls and entering initial incident information in the CAD system, while this is taking place a second operator will take responsibility for dispatching the appropriate emergency responders to the event. In south east Minnesota the Olmsted/Rochester PSAP is the only two stage operation at this time.

Unlike some areas of Minnesota and elsewhere, all ten of the centers in SE Minnesota currently dispatch for multiple agencies and across multiple jurisdictions. So in this sense, the current 10 centers have consolidated the dispatch functions of Fire, City and County law enforcement, and EMS response into a single county wide dispatch function for each county. The Rice-Steele dispatch center is currently a consolidated two county dispatch operation.

Additional Common Operational Characteristics include:

- All centers handle call taking and processing of land line E-911 calls, wireless E-911 calls, and some agency administrative phone calls.
- All centers accommodate automatic call transfers and typically transfer as much as 10% of inbound call activity to adjacent centers.

- All centers function with some form of records management system requiring creation of event records. Not all centers currently have a full Computer Aided Dispatch (CAD) software capability.
- Nine of the ten centers operate with civilian staff that report through a chain of command to the Law Enforcement entity within the City or County. The Rice-Steele County consolidated PSAP reports to a joint powers board.
- Employee turnover was not identified as a significant issue or concern for any of the centers in the region.
- All centers have a robust operator training and certification program. These varied in length by center but ranged from 6 weeks to 16 weeks. All the programs included some level of on the job training as well as certification of proficiency prior to staff being allowed to operate independently.
- None of the 10 centers in the region provide Emergency Medical Dispatch pre-arrival instruction services.

One difference that exists between the centers is that there is a variety of different staff scheduling approaches used within the region, ranging from 8 to 12 hour shifts, some fixed and some with rotating days and use of part-time staff as needed to fill out shifts. Another important operational difference that exists among the centers in the SE MN Region is the disparity in the type of non-dispatch specific, or administrative, services offered from each of the centers. This will likely impact the ability and viability of fully transitioning all current dispatch staff positions to the new consolidated PSAP. The peripheral services provided from the PSAP to other functions within the Sheriff's office may make relocation or reassignment of all current staff impractical. Below are a few of the more notable examples of non-dispatch specific or administrative services provided from the current PSAPs in the region.

- Walk-Up Window: 3 of the 10 centers have a walk up window or provide direct customer service to the public from the PSAP.
- Jail Operations: 3 of the 10 centers use their dispatch staff to supplement or fully support jail operations. In Houston County for example dispatchers have a dual responsibility as jailers and their E-911 Communication Center also functions as master control for the county jail facility. In other centers such as Winona and Fillmore County the Communication Center provides back up or support service to the jail.
- Some level of Sheriff's office administrative support was described by all the centers in the region except for the Olmsted/ Rochester PSAP. The level of support provided to peripheral administrative functions varies widely by PSAP. The Olmsted/Rochester PSAP advised that no non-PSAP related admin support is provided to the Sheriff's office or Rochester Police, while the Mower County center described numerous administrative functions supported by dispatch that may account for as much as 40% of their time and activity. Some of those functions include:
  - Warrant processing (entry, modification, confirmation, cancellation, etc.)
  - Drivers License Checks
  - Bail Studies
  - Parking Enforcement (entering citations)
  - Typing of hand written officer reports
  - After hours facility access
  - Monitoring of building alarms, cameras, and building control systems

Although it is possible to use technology to remotely address some of these additional services, such as monitoring building cameras or typing of reports; other services such as walk up window customer service, primary or backup jailer functions, or facility access are items that each county will need to evaluate to assure the levels of service are maintained if a PSAP consolidation requires the relocation of existing staff. The business planning effort that follows this assessment and feasibility study will look closer at the staffing estimates and service level issue. It is anticipated that agencies participating in a consolidated PSAP project will need to look at some level of work process reengineering, to reassign or eliminate some non-dipatch tasks. One example of this may be to replace late night telephone answering services with voice mail systems.

For a full summary of each PSAP and the operational characteristics specific to each county see the PSAP Site Assessment Summary reports included in Appendix A of this report.

3.2 - Center Operations: Analysis / Feasibility NOTE: For the most essential PSAP functions such as E-911 call taking, dispatching and multi agency, multi jurisdictional customer service, there is a strong commonality among the current centers that will aid in the potential transition to a consolidated PSAP. There are, however, several items that could be obstacles to a successful full consolidation. These include differences in the types and level of services provided from the current centers, differences in common CAD system technology and records management processes, and variations is staffing policies.

3.3 Customers

There are many similarities among the 10 PSAPs in Southeast Minnesota regarding the number and types of customers served from the centers. This is an important common denominator in determining feasibility of consolidation. Each center currently has responsibility for law enforcement at the local and county level as well as fire and EMS responders. There are numerous examples of cross county fire service areas and this is typically one of the areas where coordination and communications between the current 10 centers takes place. Consolidation of centers could improve the response times and minimize the number of transferred calls driven by the overlapping jurisdictions of the fire service. None of the centers currently dispatch directly for public works or highway agencies, but all centers do have some form of interoperable communications capability in this area. There is also a uniform practice of receiving and transferring E-911 calls between the county centers and the State Patrol dispatch center in Rochester. This function would likely not change due to a consolidation effort. The number of customers served from each center varies from 17 to 29 individual agencies.

Table 1
Customers Served by County

Agency	Law	Fire	EMS	Other
County				
Dodge	• Dodge Co. Sheriff • West Concord PD • Kasson PD • Mantorville PD • Dodge Center PD • Claremont PD • Hayfield PD	• West Concord FD • Kasson FD • Mantorville FD • Dodge Center FD • Claremont FD • Hayfield FD • Blooming Prairie FD • Pine Island	• Mantorville FD • Dodge Center FD • Clarmont FD • Dodge Center Ambulance • Hayfield Ambulance, • West Concord Ambulance • Blooming Prairie Ambulance	• Public Health • Probations • Emergency Management • Window walkups • Assist & communicate w/State Patrol, Mayo One, Public Works, & DNR. • Have contact with Highway Departments.
Fillmore	• Fillmore County Sheriff • Preston PD • Chatfield PD • Rushford PD • Fountain PD • Ostrander PD	• Canton FD • Chatfield FD • Fountain FD • Harmony FD • Lanesboro FD • Mabel FD • Ostrander FD • Preston FD • Rushford FD • Spring Valley FD • Wykoff FD	• Spring Valley Ambulance • Chatfield Ambulance • Preston Ambulance • Lanesboro Ambulance • Harmony Ambulance • Mabel Ambulance • Rushford Ambulance • Wykoff First Responders • Ostrander First Responders • *Gold Cross Ambulance • *Tri-State Ambulance • *Leroy Ambulance • *Mayo 1 helicopter • **(* Out of County)**	• Have contact with Highway Department • Jail services • Window contact for customers • Sports contract • Transcriptions/Radio, DVD/tapes of DWI arrests for courts • siren activation (not all communities) for Preston, Canton, Peterson, & Waylen • Enter warrants from the courts • Enter all ICR (CJIS) • Some state patrol dispatching • Page for anyone in the 867 prefix.
Freeborn	• Freeborn County Sheriff • Alden PD • Albert Lea PD • Freeborn Co Jail Transport • DNR & State Patrol	• City of Albert Lea FD • Albert Lea Township FD • Alden FD • Clarks Grove FD • Conger FD • Emmons FD • Freeborn FD • Geneva FD • Hartland FD • Hayward FD • Hollandale FD • London FD • Manchester FD • Myrtle FD • Twin Lakes FD	• Mayo Clinic Health Systems • Albert Lea • Freeborn • New Richland • Gold Cross Ambulance, • Blooming Prairie • Lake Mills (Iowa)	• Public Health • Environment Services • County Highway • City Public Works • Emergency Management • Walk up window • Video visitation

Agency	Law	Fire	EMS	Other
County				
Goodhue	• Red Wing PD • Cannon Falls PD • Zumbrota PD • Goodhue PD • Kenyon PD • Prairie Island Tribal PD	• Red Wing FD • Zumbrota • Pine Island FD • Goodhue FD • Cannon Falls FD	• Red Wing • Zumbrota • Cannon Falls • Kenyon (dispatch by Goodhue)	• Meisville (paged by Dakota Co.) • Randolph Fire (Dakota Co.) • North Field Fire (Dispatched by Rice Co.) • Mazzepa Fire (Wabasha Co.) • West Concord
Houston	• Houston County Sheriff • La Crescent PD • Hokkah PD • Houston PD • Caledonia PD • Spring Grove PD	• La Crescent FD • Hokkah FD • Houston FD • Caledonia FD • Spring Grove FD • Eitzen FD • Brownsville FD	• Houston • Caledonia • Spring Grove • New Albin Fire & Ambulance	• Backup jailer for the entire jail • Genoa Nuclear plant (decommissioned) code red • Siren activations • One court security • Courts logistics • Reverse 911 • Dispatcher controls elevator, sally ports, doors, etc. • Communication with Highway Dept (won't dispatch) & Environmental Services
Mower	• Mower County Sheriff • Austin PD • City of Adams PD • Browns Dale PD • Lyle/Mapleview PD • Grand Meadow PD • Contract services for Leroy	• Maple view FD • Browns Dale FD • Grand Meadow FD • Leroy FD • Adams FD • Lyle FD • Austin FD • Dexter FD	• Adams • Leroy • Grand Meadow • Austin (Gold Cross)	• County & City Attorneys • Human Services • Back ground checks for City of Austin & Housing & Redevelopment • Posse • Police Reserves (shared) • DNR & State Patrol • Community Service Officers, includes animal calls • Military & Volunteer background checks • Finger prints • Jobs for schooling & adoptions • Admin support
Olmsted	• Olmsted County Sheriff • Rochester PD Outside County: • Chatfield to Fillmore • Goodhue to Pine Island.	• Byron FD • Stewartville FD • Rochester FD • Hayfield FD • Chatfield FD • Elgin FD • St. Charles FD • Zumbro Falls FD • Pine Island FD • Oronoco FD • Dover FD • Eiota FD	• Chatfield • Eiota • Elgin • St. Charles • Gold Cross • Pine Island • Stewartville • Byron	• Page County Coroner • Court Security • Warrant Confirmation • Security camera at front door • Direct line ring down from all 5 fire stations, IBM, Airport, & Public Utilities

Agency	Law	Fire	EMS	Other
County				
Rice/Steele	• Rice County Sheriff • Steele County Sheriff • Faribault PD • Northfield PD • Lonsdale PD • Dundas PD • Morristown PD • Owatonna PD • Blooming Prairie PD	•Faribault Fire •Northfield Fire •Lonsdale Fire •Morristown Fire •Nerstrand Fire •Owatonna Fire •Medford Fire •Ellendale Fire •Blooming Prairie Fire	•Transfer to North Ambulance •Transfer to Gold Cross •Transfer to Allina Ambulance •Page Ellendale Ambulance •Page Blooming Prairie Ambulance	• Call out for tow trucks • Page weather spotters • Auto dial (code red) notification to residents for any warnings.
Wabasha	• Wabasha Co. Sheriff • Wabasha PD • Lake City PD • Plane View PD • Kellogg PD • Contract with Mazeppa & Elgin PDs	• Lake City FD • Zumbro Falls FD • Elgin FD • Kellogg FD • Mazeppa FD • Plainview FD • Wabasha FD	• Zumbro Falls First Responders • Mazeppa First Responders • Kellogg First Responders • Lake City Ambulance • Kellogg Ambulance • Plane View Ambulance	• Public Utilities (Excel, City Water) • DNR & State Patrol • Parks • Jail (transports, schedule/trip plan, Jail visitation, video visitation)
Winona	• Winona County Sheriff • Winona PD • Goodview PD • Lewiston PD • St. Charles PD	• Winona FD • Goodview FD • Minnesota City FD • Rolling Stone FD • Lewiston FD • St. Charles FD • Wilson FD • Ridgeway FD • Nodine FD • Pickwick FD • La Crescent FD • Attura FD • Dakota FD • Hidden Valley FD • Plainview FD	• Stockton & Elba Ambulance • Winona • Altura • Lewiston • St. Charles • Tristate • Rushford, • Plainview (fire and ambulance) • Air EMS - Medlink & Mayo	• County Admin • Winona County Highway Department • Us Fish & Wildlife • Court Security • Winona City Courts, • Jail Control Point (doors), monitor facilities

In addition to the more traditional law enforcement, fire and EMS users that are served from the centers, some of the other peripheral customers include:

- General Public – Walk Up window
- Local Business and media (Information Dissemination)
- Emergency Management
- Private Ambulance Services
- County Highway
- City Public Works
- Adjacent State / County
- Public Health
- Environmental Services
- Probations
- County Jail – Dispatcher as back up jailer (control sally port and doors)
- County Courts – Security
- Remote Phones Roll to dispatch
- Public Heath

The services provided to these less conventional PSAP customer agencies will need to be closely evaluated in the business planning for a consolidated PSAP to assure that the services currently provided are addressed from the new consolidated center, or other means are provided locally to accept or redirect this work load.

For a full summary of each PSAP and the Customers and Services specific to each county see the PSAP Site Assessment Summary reports included in Appendix A of this report.

2.3 - Customers: Analysis / Feasibility NOTE: Each of the existing centers currently serves multi agencies and multiple jurisdictions, this should aid in a transition to a consolidated PSAP that would simply expand on the current geographic foot print of the center. A consolidation would likely improve operations in the fire service by eliminating the need for center to center call transfers and the additional coordination often required for response by agencies that serve areas outside the current geographic boundaries of existing centers. It is important to note that not all current customers or services provided by each individual center would continue to receive service from a regional joint PSAP. It is important to identify and plan for each of these services and customers through the business planning process to assure that alternate methods or providers are identified for each of the customers or services not incorporated into a consolidated PSAP plan.

3.4 Staffing, Service Levels, Call Volumes

Determining the appropriate staff requirements to support a defined level of service and call volume is one of the most challenging and controversial elements of a PSAP Consolidation effort. Understanding the current staff positions within each of the existing centers and also defining the services and levels of activity supported by those staff is an essential starting point to the consolidation analysis. Using data reports of E-911 call volume, administrative call volume, radio traffic volume, and CAD records generated from each of the current centers is a starting point and will be used as one of the key drivers for the staffing needs of any consolidation scenario. In addition to call volumes, the types of specialty or non-call related activity and services are factors in the current staffing plans for each center.

Typical public safety communication center staffing is established to assure a level of service or Quality of Service (QOS) level so that the public does not experience busy signals when calling E-911. A high QOS is desired to serve the public's needs to answer E-911 calls and dispatch response units. General public safety systems strive for a minimum QOS in the communication center design that allows for initial blocking (queuing) of 1% or less of E-911 calls. For this analysis and for future business planning and consolidation scenario comparisons, each PSAP provided annual 2010 statistical data for E-911 call activity; Administrative Call activity, Radio Traffic activity, and CAD record generation activity. Where needed SEH projected call quantities and activity levels to supplement missing data. Any projected data was based on best estimates derived from adjacent centers with similar staffing levels, population characteristics, and other activity measures. SEH then utilized Erlang-C analysis with QOS requirements to define the minimum staffing requirements to be proposed for each consolidation alternative.

Currently, the PSAPs in the 11 county Southeast Minnesota region operate with as many as 117 full-time and up to 22 part-time dispatchers/communications personnel. The 10 centers in the region handle approximately 1 million E-911 and administrative calls annually, provide associated dispatch services with over 1.9 million radio transmissions and create some 560,000 CAD Records annually.

The table below provide estimates of staff and call volume data collected from each of the existing centers. The data reflect 2010 information unless noted otherwise. In some instances estimated data was created where none was provided and is based on data from similar sized centers with like staffing, customer base, and citizen populations served.

Table 2
Staffing and Call Activity

Staffing	Dodge	Fillmore	Freeborn	Goodhue	Houston	Mower (2009)	Olmsted (2009)	Rice/Steele	Wabasha	Winona	Totals
Supervisory Staff	1	1	1	2	2	1	5	5	1	1	20
Full Time Dispatchers	4	4	8	10	7	9	20	15	8	12	97
Part Time Dispatchers	9	4	2			1	0	2	3	1	
Part Time FTE Equivalent	4.2	2	1			0.75	0	1	2	0.25	11.2
Center FTE Total:	**9.2**	**7**	**10**	**12**	**9**	**10.75**	**25**	**21**	**11**	**13.25**	**128.2**
Call Activity	**Dodge**	**Fillmore**	**Freeborn**	**Goodhue**	**Houston**	**Mower (2009)**	**Olmsted (2009)**	**Rice/Steele**	**Wabasha**	**Winona**	**Totals**
911 Call Activity	49,655	66,718	23,117	14,702	4,380	135,747	205,717	166,248	55122	12,353	997,739
Admin Line Activity	(W/911)	(W/911)	(W/911)	95,506	41,610			(W/911)	(W/911)	126,864	
Radio Traffic Activity	100,567	87,367	46234	258,289	83,220	249,782	411434	332496	110244	266,095	1,945,728
CAD Record Activity	14,563	44701	41,646	47,543	30813	90950	97,565	123,985	36932	36,571	565,270
Center Call Activity Total:	**164,785**	**198,786**	**110,997**	**416,040**	**160,023**	**476,479**	**714,716**	**622,729**	**202,298**	**441,883**	**3,508,737**
Grey = Estimated Data											

Common operating practices and procedures within the dispatch center industry are evolving and can aid in providing service level improvements when a PSAP consolidation takes place. Current operations have variation from center to center depending on the operational policies in place within the specific law enforcement, fire service and EMS agencies served from the center. Defining and migrating to a common set of operating protocols and procedures is an issue that can cause difficulty in a consolidation effort. Those services specific to each center that are driven by the operational guidelines and preferences of the agencies served from each center will likely need to be modified or adjusted to be uniform among a larger set of users. CAD systems can allow for agency specific rules for response protocols. However, it is recommended that significant discussions regarding operational procedures and polices take

place as the consolidation project proceeds. Some of the operational items that differ between centers include what type of events require multi-unit responses, what fire pages are sent and verified, what type of events constitute the creation of an incident report, and others.

Some additional staffing / human resources considerations include:

- Employment agreements: Policies and contract provisions for the potential of relocating or reassigning staff between centers will need to be addressed. Some, but not all of the current dispatch employees within the region are represented by collective bargaining union agreements. Consolidation among agencies operating under a common bargaining agreement may provide some ease of transition. However, depending on the final configuration and governance model selected it is likely that new contract arrangements will be needed for most, if not all of the current communication center staff. The staffing plan, to be created in the Business Plan phase of this project, will also need to address separation/retirement contingencies for current employees, benefit packages, and seniority rights.
- Uniform training and competency testing: Each of the current centers in the region has an established training and certification program. Prior to any new consolidated center start-up the staff that migrate to the new center will need to be trained and certified on any new or changing technology and updated operational procedures designed to accommodate the changes in customers or service areas created by the consolidation.
- Additional supervision and support services: While a consolidation may allow for reductions in overall staff level, this is not always achieved. While the newly consolidated center will likely need fewer call takers and dispatchers than the combined staff of the consolidating agencies, new positions may be required to support the larger organizational structure for all but the Rice/Steele PSAP. For each of the current centers the PSAP is managed as a function of a City or County Law Enforcement agency. These agencies use current command staff to provide oversight and management of the PSAP. This typically limits the career path available to PSAP staff. In a larger consolidated PSAP, the organizational structure tends to expand. This expansion may include:
  - The separation of call taking and dispatching into two separate functions.
  - The addition of in-house trainers, quality assurance staff, and technology support positions.
  - Addition of shift supervisors, and management staff.

The reduction of call taker/dispatcher positions and the creation of new positions can have the effect of cancelling each other out, potentially negating staff reductions and associated cost savings. Staff levels will be addressed in more detail in the Business Plan report. It is believed that the expansion of the organizational structure has two key benefits. First, the addition of trainers, shift supervisors, and quality assurance staff will improve the level of service and reduce human error. Second, the expanded structure may provide a career path for employees, and can increase employee retention and reduce the costs associated with hiring and training new staff.

One traditional approach to building a staffing estimate for a consolidated center is to project staff need based on current center work load (measured volume of calls, dispatches, and records created) and the current center staffing levels. The Erlang C mathematical modeling tool can give us a first cut look at future staffing projections. Erlang C is a traffic modeling formula used in call center scheduling to calculate delays or predict waiting times for callers. Erlang C can also calculate the resources that will be needed to keep wait times within the

call center's target limits. The Erlang C traffic model can estimate how many dispatchers are needed in a call center. The following tables provide base line call volume and staffing data provided by each or the 10 PSAPs in the region. The tables also project staffing estimates for call taker – dispatcher staff levels to accommodate the aggregate call volumes for potential future PSAP configurations for 2 centers in the region, 3 centers in the region, or 4 centers in the region. Additional staffing and organization planning will take place in the business planning phase of this project.

Table 3
Erlang C – Summary Staffing Model Estimates

PSAP Staffing Level and call volumes for 10 Centers					Erlang C Calculations			
MN SE County PSAP	Authorized Staffing (Including Supervisors)	Total Phone, Radio & ICR Calls	25% Work Load Factor	Average # of Actions Per Day	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Recommended Staff
Dodge	9.2	164785	205981	564.33	23.51	40	2	9.2
Fillmore	7	198786	248483	680.77	28.37	40	2	9.2
Freeborn	10	110997	138746	380.13	15.84	40	2	9.2
Goodhue	12	416040	520050	1424.79	59.37	40	2	13.9
Houston	9	160023	200029	548.03	22.83	40	2	9.2
Mower	10.75	476479	595599	1631.78	67.99	40	2	13.9
Olmsted	25	714716	893395	2447.66	101.99	40	2	25.2
Rice/Steele	21	622729	778411	2132.63	88.86	40	2	15.8
Wabasha	11	202298	252872	692.80	28.87	40	2	9.2
Winona	13.25	441883	552354	1513.30	63.05	40	2	13.9
Total	128.2	3508737	4385921	12016				128.7
* Grey = Estimated Data								
PSAP Staffing Level and estimated call volumes for 4 Centers, Geographic					Erlang C Calculations			
MN SE County PSAP	Authorized Staffing	Total Radio & ICR Calls	25% Work Load Factor	Average # of Calls Per Day	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Recommended Staff
North	32.2	783123	978903	2681.93	111.75	40	2	25.2
South East	29.25	800692	1000865	2742.10	114.25	40	2	25.2
South West	41.75	1210205	1512757	4144.54	172.69	40	2	36.8
Olmsted	25	714716	893395	2447.66	101.99	40	2	25.2
Total	128.2	3508737	4385921	12016				112.4

(North = consolidation of Dodge, Goodhue & Wabasha Counties)
(Southeast = consolidation of Fillmore, Houston & Winona Counties)
(Southwest = consolidation of Freeborn, Mower & Rice/Steele Counties)

Table 3 (Continued)
Erlang - Staffing Model Estimates

PSAP Staffing Level and estimated call volumes for 4 Centers, CAD					Erlang C Calculations			
MN SE County PSAP	Authorized Staffing	Total Radio & ICR Calls	25% Work Load Factor	Average # of Calls Per Day	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Recommended Staff
North	**55.45**	1336003	1670003	4575.35	190.64	40	2	**36.8**
South East	**26.75**	835289	1044111	2860.58	119.19	40	2	**25.2**
South West	**21**	622729	778411	2132.63	88.86	40	2	**15.8**
Olmsted	**25**	714716	893395	2447.66	101.99	40	2	**25.2**
Total	**128.2**	**3508737**	**4385921**	**12016**				**102.9**

(North, CIS CAD = consolidation of Dodge, Freeborn, Goodhue, Wabasha & Winona Counties)
(Southeast, Various CAD = consolidation of Fillmore, Houston & Mower Counties)
(Southwest, LOGIS CAD = Rice/Steele Counties)
(Olmsted, New World CAD)

PSAP Staffing Level and estimated call volumes for 3 Centers, Geographic					Erlang C Calculations			
MN SE County PSAP	Authorized Staffing	Total Radio & ICR Calls	25% Work Load Factor	Average # of Calls Per Day	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Recommended Staff
North	**57.2**	1497839	1872298	5129.58	213.73	40	2	**36.8**
South East	**29.25**	800692	1000865	2742.10	114.25	40	2	**25.2**
South West	**41.75**	1210205	1512757	4144.54	172.69	40	2	**36.8**
Total	**128.2**	**3508737**	**4385921**	**12016**				**98.7**

(North = consolidation of Dodge, Goodhue, Wabasha & Olmsted Counties)
(Southeast = consolidation of Fillmore, Houston & Winona Counties)
(Southwest = consolidation of Freeborn, Mower, & Rice/Steele Counties)

Table 3 (Continued)
Erlang - Staffing Model Estimates

PSAP Staffing Level and estimated call volumes for 3 Centers, Transportation

MN SE County PSAP	Authorized Staffing	Total Radio & ICR Calls	25% Work Load Factor	Average # of Calls Per Day	Erlang C Calculations: Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Recommended Staff
Hwy 61	**45.25**	1220244	1525305	4178.92	174.12	40	2	**36.8**
I 90/Hwy 14	**51.95**	1554767	1943458	5324.54	221.86	40	2	**36.8**
I 35	**31**	733726	917158	2512.76	104.70	40	2	**25.2**
Total	**128.2**	**3508737**	**4385921**	**12016**				**98.7**

(Hwy 61 = consolidation of Goodhue, Wabasha, Winona & Houston Counties)
(I 90/Hwy 14 = consolidation of Dodge, Olmsted, Mower & Fillmore Counties)
(I 35 = consolidation of Freeborn, & Rice/Steele Counties)

PSAP Staffing Level and estimated call volumes for 2 Centers, North - South

MN SE County PSAP	Authorized Staffing	Total Radio & ICR Calls	25% Work Load Factor	Average # of Calls Per Day	Erlang C Calculations: Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Recommended Staff
North	**66.45**	1847735	2309668	6327.86	263.66	40	2	**50.4**
South	**61.75**	1661002	2076252	5688.36	237.02	40	2	**50.4**
Total	**128.2**	**3508737**	**4385921**	**12016**				**100.8**

(North = consolidation of Dodge, Goodhue, Rice/Steele, Wabasha & Winona Counties)
(South = consolidation of Freeborn, Fillmore, Houston, Mower, & Olmsted Counties)

PSAP Staffing Level and estimated call volumes for 2 Centers, East - West

MN SE County PSAP	Authorized Staffing	Total Radio & ICR Calls	25% Work Load Factor	Average # of Calls Per Day	Erlang C Calculations: Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Recommended Staff
East	**65.25**	1717706	2147133	5882.56	245.11	40	2	**50.4**
West	**62.95**	1791030	2238788	6133.67	255.57	40	2	**50.4**
Total	**128.2**	**3508737**	**4385921**	**12016**				**100.8**

(East = consolidation of Fillmore, Houston, Olmsted, Wabasha & Winona Counties)
(West = consolidation of Dodge, Freeborn, Goodhue, Mower & Rice/Steele Counties)
* **Assumptions:** Where estimated, radio traffic = 2 x Total Call Activity; where estimated CAD records = Total Call Activity/2
Adjustment Factor introduced to accommodate additional staffing, complexity, and coordination needed for larger autonomous PSAP operations.

The complete Erlang C Calculation table with additional date fields is included in Appendix E of this report.

These early projections do need to be refined to take into consideration additional staff that may be needed to provide center management and support. Also, some functions currently performed in the 10 existing centers may not be suited for transition to the consolidated model. Some staff positions may need to be retained in the current agencies to continue to support those activities. These staffing adjustments will be addressed further in the business planning process with comparisons to other existing PSAPs with common populations and activity levels as well as thru the development of organization charts and staffing plans for each consolidation scenario.

While quality of service, staffing and call volumes play an essential role in the analysis of Consolidation Feasibility, it is also important to document and account for all services currently provided from each of the PSAP's in the region. It is likely that some of the services currently provided out of the existing centers are not conducive to being supported or provided from a new consolidated center. One primary example would be the customer service provided at a walk up window in the existing centers. Although it is feasible that some customer support could be provided form a remote location with autodial phone sets and video camera monitoring, it is also likely that those agencies that now provide direct face to face walk up window customer service may want to continue to have a person assigned to provide this service during traditional business hours. Services like this and others will need to be evaluated in the business planning phase of this project to determine which services will be provided in a consolidated environment and which will need to be retained by the current agencies and provided from other non-dispatch staff. This will also need to be addressed in the staffing and cost benefit analysis for any given consolidation scenario.

A listing of services provided by the current centers includes:

- E9-1-1 call taking / call transfers
- Agency specific administrative phone line call taking
- Emergency responder radio dispatching
- Monitoring of radio traffic / coordination of field personnel
- Creation and updating of CAD system records
- Roll over telephone support for local PD and Fire stations for after hours calls
- Reverse E-911 public notification
- Warning siren activations
- Retrieval of logged audio records for courts
- Customer window information requests
- Back up support for jail operations
- Monitoring of building alarms
- Monitoring of security cameras
- Participate in agency policy and process decision making
- After hours building access
- Provide information to local businesses (Call Tree / Key holder)
- Coordination with impound lot
- Coordination with local EOC and emergency management

In addition to the services identified in the site interviews, one of the attributes of customer service that is often discussed in a PSAP Consolidation study is the direct contact and relationship developed and built between dispatchers and local first responders. The location and association of the current 10 PSAPs with their local communities is an intangible component of the services provided by the current 10 center configuration. With the dispatch center housed within the agency law enforcement center, there is opportunity for interaction and comradery between dispatchers and responders that is often not practical when a regional consolidation occurs. There is also a belief that having the PSAP located within a specific agency jurisdictional boundary with staff local to the area may provide a better understanding of local landmarks and unofficial place names. Some members of the steering committee expressed concern that any reduction in dispatch centers would reduce the levels of service because of the lack of familiarity with a larger geographic area being served from a combined center. Members also commented that they fear that receiving service from a larger center will be detrimental to the personal relationships and familiarity between dispatchers and the field personnel they serve, potentially reducing the quality of service provided. Other members of the steering committee had sited their own transition between centers and advised that you can and do learn new geographic terrain and local references to the geography. There was also a recognition that regardless of the personal relationship, there is a professional level of service that should be provided, and is provided to customers regardless of whether there is a personal relationship between the dispatcher and the field staff. Some members felt that a well staffed center would have the potential to improve levels of service. There is generally agreement in the industry that professional dispatch staff and appropriate use of technology such as GIS mapping systems, Mobile Data Computing and Automatic Vehicle Location can provide for enhanced service levels.

3.4 - Staffing, service levels, call volumes: Analysis / Feasibility NOTE: There are currently 128 fulltime equivalent positions operating from 10 centers in South East Minnesota. These centers handled over 3.5 million measurable call, radio or CAD tasks in 2010. In addition the centers supported a wide variety of non measurable agency and customer support activity. An early mathematical projection looking at the measureable work load and maintaining a public safety grade Quality of Service standard predicts that a potential staffing level of between 98 to 112 positions is possible within the region depending on the consolidation scenario deployed. There are a large number of common services provide from the current PSAPs that can be consolidated. However, some services are not conducive to being supported or provided from a new consolidated center. Some current staff positions will likely need to be retained at existing sites or some form of task and service reengineering will be needed to accommodate those services note incorporated into a consolidated operation.

3.5 Costs / Budgets:

This financial overview is intended to provide a summary of the current expenditures associated with providing E-911 and public safety dispatching services from the current 10 PSAPs operating in the Southeast Minnesota region. Having a base line for evaluation of operating costs will allow for projections of future consolidated PSAP budgets. In order to evaluate feasibility of each PSAP consolidation scenario, future center operating budgets will need to be projected along with the determination of appropriate service levels and customers served. Today, all of the communities within the region are provided call taking and direct dispatch services from one of the ten centers in the region. The current PSAPs are funded with public tax dollars from agency operating fund allocations that are part of the City or County Law enforcement agency that manages the PSAP. Some of the current centers use some form of cost sharing or cost allocation to distribute the operating costs of the center.

This currently occurs between Freeborn County and the City of Albert Lea, between the City of Rochester and Olmsted County, and between Rice and Steele Counties. The formulas for cost distribution vary. All of the remaining centers fund the PSAP operations via the Sheriff's Office operating budget as approved by each County Board. All of the centers do receive some level of state offset to their operating costs in the form of a defined portion of the surcharges attached to wire line and wireless telephone services. The surcharges are paid to the state by telecommunications services providers and returned to PSAPs through a variety of grant programs.

Each PSAP currently has full control over defining appropriate types of services and level of service delivery, determination of appropriate technology, and associated training, recruitment, selection and retention of staff. These factors all have an impact on operational costs and capabilities of the PSAP. Within a Consolidated PSAP, each of these elements will need to be determined and agreed to by the participating entities.

Cost savings are often seen as the impetus for PSAP consolidation. However, it is often found that a consolidated PSAP can have similar staffing levels and operating costs. There is often reduction in actual call taker and dispatcher positions, but there is typically additional staff for management and support positions. Cost savings in consolidated PSAPs are often attributed to the shared purchase and support of technology systems, more so than staffing costs. The approach of NG-911 will be a significant cost for many PSAPs and will also have personnel implications. This may be one potential for cost savings in the region.

The operating cost information received from the current 10 centers is shown in the table below.

Table 4
PSAP Operational Costs

	Dodge	Fillmore	Freeborn	Goodhue	Houston	Mower (2009)	Olmsted (2009)	Rice/Steele	Wabasha	Winona	Totals
Personnel Staff Costs	$448,008.00	$350,000	$422,220	$760,567	$494,514	$831,074	$1,918,485	$1,377,889	$675,621	$804,594	$8,082,972
Equipment Costs							$12,578		$4,511	$20,821	$37,910
Operational Costs	$26,000.00	$20,000	$26,020	$52,282	$13,500	$10,202	$43,169	$70,347	$28,275	$30,982	$320,777
Maintenance Costs	$19,000.00	$8,000	$34,764	$84,850	$14,300	$35,539	$128,682	$348,668	$5,847	$8,489	$688,139
Other Costs			$227,734			$45,741	$2,092	$32,828	$8,354	$0	$316,749
Total Costs	**$493,008**	**$378,000**	**$710,738**	**$897,699**	**$522,314**	**$922,556**	**$2,105,006**	**$1,829,732**	**$722,608**	**$864,886**	**$9,446,547**
(All costs for the year 2010 except where noted)											

There are a number of cost drivers associated with operation of each PSAP. However, from the data available it is clear that the Staff component is the most significant ongoing operating cost. The staff element of PSAP costs ranges from 60% to 94% for the data shown. The staff cost shown include salary and wages as well as benefits. The other major area of cost is the general operations and maintenance categories. Cost items that make up these categories may include utility costs, training, office supplies, software subscription fees, equipment maintenance contracts, and other miscellaneous costs of operating the centers. These numbers are shown as a comparison tool and base line for business planning. However, caution should be used when directly comparing costs between PSAPs due to differing budget practices and definitions. Agency hosted PSAPs normally do not show the full cost of the PSAP due to agency supplied support for facilities and administration costs such as legal

IT support, human resources support, finance support, etc. Costs for consolidated centers often appear higher but may just be more transparent because they necessarily will have specific line items for these required facility, technology support and administration type operations costs.

Based on the information provided, the total staffing cost to support the current 10 center configuration is $ 8.08 million. The current operations and maintenance cost for the 10 center configuration is $ 1.0 million. In the business planning phase of this project we will be establishing recommended staffing models and projecting operating costs for various alternate operating scenarios for PSAP configurations including a two center model, a three center model and a four center model. Early staffing projections for these models were given in section 2.4 and will be further refined in the business plan document.

This analysis is solely based on the staff requirements needed to accommodate E-911 and administrative call taking, dispatching, and records management functions. Because these projections are based on data made available from each current center there is a wide variation in the measurement approaches and metrics used. This analysis should be considered a first cut, base level for comparison purposes.

The staffing projections from this early comparison of the consolidation scenarios projects a potential for reductions from the current 128 staff in the region to a potential 100 within the region for the two center scenario.

Another source of analysis for cost considerations is to look at the experience of other centers and prior PSAP consolidation studies. The Minnesota Department of Public Safety PSAP Consolidation Report to the Minnesota Legislature included the following conclusions related to costs and benefits of PSAP Consolidation:

1. Larger PSAPs have lower cost-per-E-911-call and cost-per-event numbers than smaller PSAPs, indicating potential for cost savings from consolidating smaller PSAPs.
2. Based on E-911-call and event-per-FTE numbers, the potential for cost savings in smaller PSAPs seems rooted in minimum staffing requirements.
3. These potential operating cost savings from consolidation quickly diminish above a certain level of activity (20,000 E-911 calls and 10,000 events per year).
4. The potential for capital cost savings also exists when a neighboring PSAP has excess capacity, a PSAP is in need of significant capital upgrades, and the necessary transition costs are sufficiently low.
5. The potential cost savings may not be achievable, in some PSAPs, due to minimum around-the-clock staffing needs of jails and law enforcement centers.
6. Actual PSAP consolidations have not always resulted in cost savings. The reasons for this include: the PSAPs already had relatively high efficiencies prior to consolidation; no positions were eliminated out of the desire to avoid layoffs; backfilling of prior dispatcher responsibilities was required; costs previously not on the PSAP budget were now included on that budget.
7. The likelihood of cost savings, and their magnitude, for any specific proposed consolidation, would have to be determined as part of a feasibility study that looked very closely at job responsibilities and minimum staffing requirements.
8. The cost indicates the cost-saving potential for consolidation of State Patrol PSAPs as much as it indicates the potential for local government PSAPs. Although the feasibility of

any specific consolidation needs to be determined by looking at specifics, the State would have more credibility in encouraging local government to consolidate PSAPs if it conducted a specific study on the feasibility of consolidating State Patrol PSAPs.

3.5 - Costs/ Budgets: Analysis / Feasibility NOTE: There are numerous factors that play into developing costs and budgets for a consolidation effort. Using data supplied by the current PSAP operations a base line can be established. Cost should be a serious factor in determining the direction but it should not be the overall driving factor. Cost savings may be realized in the long-haul but improved efficiency and level of service can usually be realized early in the consolidation process. The analysis of current PSAP expenditures in the region suggests that savings will be achievable in personnel costs, although the actual amount will be dependent on which consolidation scenario(s) are implemented. The business plan will provide a more detailed analysis of projected operational costs for each scenario. Total costs will also be impacted by the need to reassign, re-engineer or eliminate the "non-dispatch" tasks, such as records entry, lobby service, vehicle impound releases, etc., currently performed by dispatchers in several centers. Experience in other consolidations has shown that sharing the purchase, maintenance and support of PSAP core technologies such as Next-Generation 9-1-1 equipment, logging recorders and CAD systems provide the greatest potential for cost savings.

Depending upon consolidation scenario(s) and governance structure, the consolidated PSAP may need to budget for certain support costs, which are not included in many of the current PSAPs budgets. Facility management, IT support, human resources, legal and fiscal services are often not included in agency-hosted PSAPs but must be accounted for in the consolidated PSAP.

3.6 Equipment Capabilities

One of the potential major cost drivers of a PSAP consolidation effort is the cost of technology upgrades or expansion needed to support the new center or center expansion. During the site visit and inventory process a review of existing systems and technology was done to set a base line for the current equipment in use within the region. One of the consolidation challenges is to standardize and/or integrate all communications, applications and data from existing centers into a new consolidated center. Technologies such as CAD, Console Systems, Radio Systems, and Next Generation E-911 must accommodate multiple jurisdictions and agencies and numerous call types. These systems may also be required to interface to other jurisdictions and local sub-systems such as mapping, mobile data, fire station alerting, paging, and others. State and federal databases and various third-party software providers, such as police and fire/rescue records management systems (RMS) are also important design considerations. When possible, relocation and reuse of existing equipment is an economical and responsible choice. However issues can arise and the following needs to be considered:

- The equipments age, make, model, and software version. Also need to consider what future plans the vendor has for the equipment and any significant changes.
- The ability of the equipment to expand and accommodate the functionality and size needed in the larger consolidated PSAP.
- Connectivity to other systems. With technology changing at a rapid pace today, the manner in which equipment connects or interfaces with each other changes. Older equipment may still function well but it may no longer be able to interface with current technology that a consolidated PSAP would require.
- Older equipment may be more susceptible to damage when moved.

- Costs to upgrade older equipment may not be effective and new equipment in the long run may be less expensive.

The following table shows the common technologies used in the SE PSAPs:

Table 5
SE MN PSAP Technologies

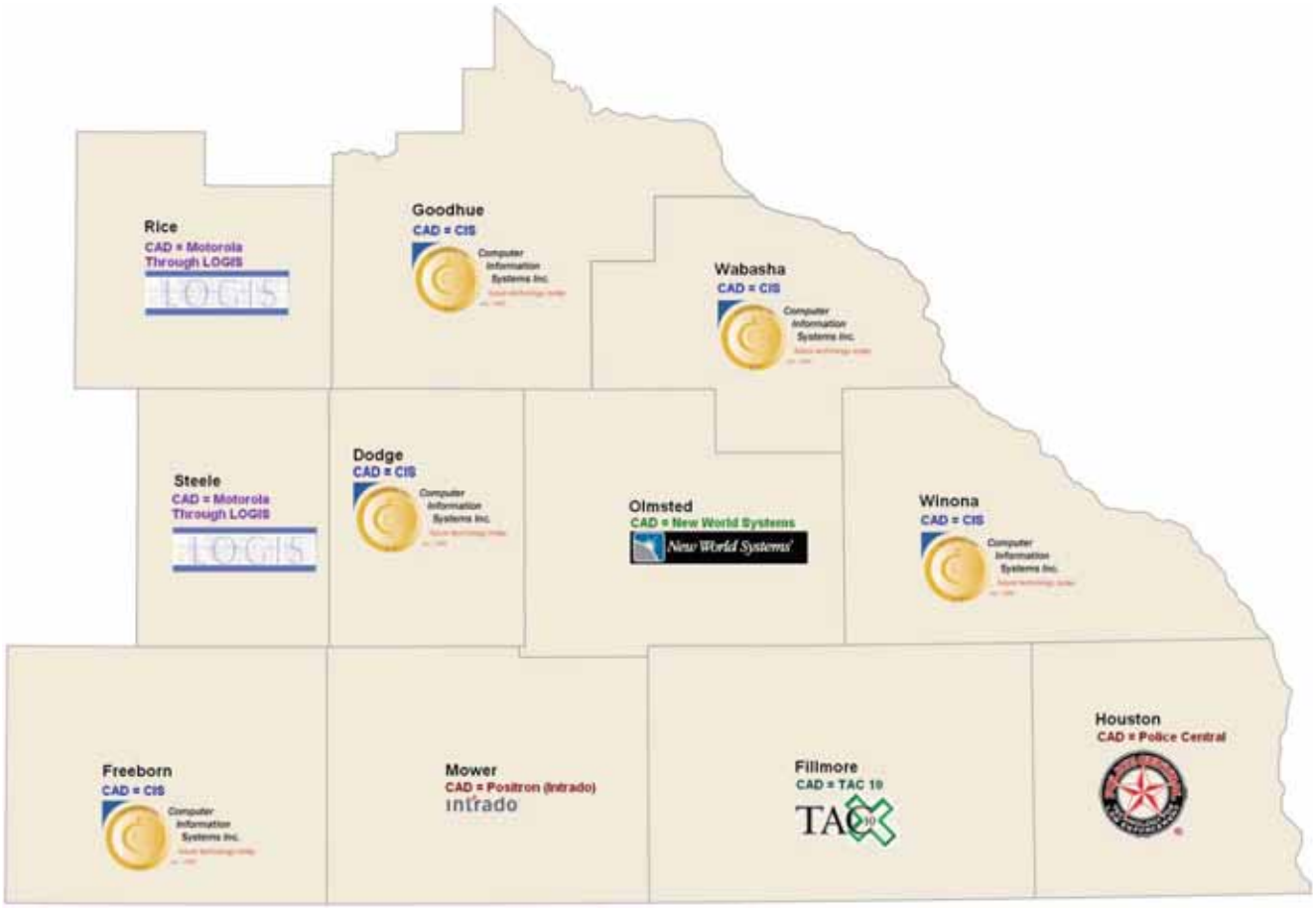
MN SE County PSAP	Common Technology		
	Radio Console	**CAD System**	**Audio Logging Vendor**
Dodge	Motorola Gold Elite	CIS	Verint, analog
Fillmore	Motorola Gold Elite	TAC 10	Eventide for calls
Freeborn	Zetron, MCC 7500 to be installed	CIS	NICE to be installed
Goodhue	Motorola MCC 7500	CIS	NICE and Higher Ground
Houston	Motorola Gold Elite, upgrading to MCC 7500	Police Central	TEAC analog, considering NICE
Mower	Orbicom	Positron (Intrado)	Verint
Olmsted	Motorola Gold Elite	New World Systems	Verint, audio log - Mercom
Rice/Steele	Motorola MCC 7500	Motorola through LOGIS	NICE
Wabasha	Motorola MCC 7500	CIS	Eventide
Winona	Motorola Gold Elite, upgrading to MCC 7500	CIS	MACTEK (analog), Higher Ground. Also had preliminary talks with NICE.

3.6.1 CAD Systems

The CAD system needs to be sized appropriately to meet existing and future performance criteria and to provide sufficient on-line incident history. Due to the unique needs of each county, any existing CAD functionality they have should not be lost once they become part of a consolidated PSAP.

A consolidated PSAP will require a standardized CAD system and the Counties that will be part of the consolidation will need to choose a single system for the new PSAP. The designated PSAP facility will have to obtain several files that may include GeoFiles, Master Name Files, Incident History Files and others, from counties who will be part of the consolidation. Where some counties have the same CAD software this is as simple as updating the file with the area to be dispatched. This does not involve file conversions. More than likely it will involve data entry work on the consolidated PSAP's CAD program. For the counties that have different software, a file conversion will have to be accomplished to get the data into the consolidated PSAP's CAD system.

Figure 1 – MN SE Counties, CAD Systems



While it is possible that some CAD equipment may be reusable or expandable to meet the needs of a new consolidated PSAP, it is also possible that new equipment may need to be purchased depending on the consolidation scenario selected. Some factors to consider when determining the upgrade or expansion of existing CAD systems include:

1. By the time a new facility is constructed or renovated, the current CAD equipment will be considerably older. It is generally not recommend attempting to relocate and re-use equipment that is an average of 5 - 7 years old as it is approaching the end of the CAD life cycle.
2. The current equipment would also likely need upgrades and/or other modifications to be useable in a consolidated environment and may not be cost-effective.

3.6.2 Radio Console Systems

As with the CAD system, the new consolidated PSAP dispatch consoles will need to be sized appropriately to meet existing and future performance criteria. Except for Mower County, all Counties in the southeast region have either Motorola Gold Elite or Motorola MCC 7500 console equipment, or are in the process up upgrading to an MCC 7500 console system. Mower County is the only county in the South East region that has a non Motorola system. In a memo dated October 1, 2010, Motorola stated their intentions to cancel the Gold Elite Console systems and are no longer accepting orders for these systems which have been replace by the MCC 7500. PSAPs using the Gold Elite console system will have to consider a replacement console system within 4 to 5 years from that date.

In a consolidated PSAP, the number of console operator positions needed will be a function of the staffing plan, the style of dispatch (single or dual stage), and the peak hour work load estimates for the center. Some other factors to consider for Radio Console planning include:

- Consoles should be available in a separate area for training and an additional console (or more if required) available in the EOC for special events and multi-agency incidents.
- The main dispatch area should have a supervisory station that has a physical view of the dispatch room, and access to all computer and radio systems, building alarms, and video surveillance systems.
- All radio operator positions in the consolidated PSAP should be designed and equipped identically, to allow control and operation of any radio channel and jurisdiction from any console. Operational flexibility and internal redundancy is enhanced if all work stations are capable of both call taking and dispatching.
- Each console should have two headset jacks that allow operation of radio and telephones, to provide back-up access, dual-dispatcher operation at a console, and side-by-side training or observation by a supervisor.

3.6.3 Radio Systems

Consolidating the PSAPs to a new centralized location will require re-routing the connectivity to all participating Counties radio resources. The PSAP migration plan will need to establish the most cost effective method to access each legacy radio system from the consolidated PSAP. It should not be assumed that all existing radio equipment could be moved or transferred to a new consolidated PSAP location as the Sheriff‘s Office and/or City Police may wish to maintain some radio equipment at their respective facilities for agency use. For Counties that are on the ARMER system, they will need to work with MnDOT to have T1’s routed from the new consolidated PSAP to the perspective radio sites that will be part of the consolidated center. Connectivity to RF Control Stations for back up and for paging systems will need to be considered in a final design plan as well. Console systems will need to be upgraded to accommodate the additional radio sites, paging sites, and any legacy systems that need to remain intact.

Having 9 of the 10 current Counties operating on the ARMER radio system provides many advantages and a high level of flexibility for establishing consolidation alternatives. The ARMER system backbone will allow for dispatch functions to occur region wide from any location that has connectivity to the Master Switching Office hub site located in Rochester.

3.6.4 Logging Recorder Systems

In a consolidated PSAP, the call volume, type of agencies served, size, and number of field units supported will greatly increase and all play a role in the level of systems needed. The more calls, field units, and agencies that are supported the more functionality the systems must provide. Generally, cost rises, as functionality needs increase. Therefore, when combining several small PSAPs replacing technology is common. Table 5 on page 20 shows the audio loggers currently used by the Counties in the southeast region.

Along with the recent upgrades of console and radio equipment that are underway in the region as part of the ARMER system migration, some counties have also recently upgraded to the NICE brand digital logging equipment and now share a common platform for audio logging. This has the potential to aid in a PSAP consolidation, minimize costs, and improve compatibility for the counties that have this shared platform.

3.6.5 Mobile Computing / Automatic Vehicle Location (AVL) Systems

Within the southeast region 5 of the 11 counties have some level of mobile computing capability within vehicles that make use of AVL and integrate with their CAD systems. These counties include Freeborn, Goodhue, Mower, Olmsted, Rice and Steele. Mobile computing and AVL provide many officer and dispatcher efficiencies. AVL can visually map the location of the vehicles in relation to a call for service or other emergency and provides dispatchers with the information they need to assign the closest unit. These technologies can minimize over the air radio traffic freeing dispatch personnel for other tasks, and provide real-time fleet management capabilities for locating and assigning resources. This allows dispatchers to always know the location of their vehicles. Location information on vehicles is one tool that is often referenced to mitigate the difficulties that arise when dispatching for larger numbers of users and over a large geographic area.

Mobile computing and AVL are additional tools, like CAD and Radio system technologies that provide the most efficiency in a consolidated PSAP when a common platform is used and all users are equipped with the same degree of capabilities. The current disparity in the deployment of mobile computing and AVL is a significant policy and cost consideration in the PSAP consolidation decision.

3.6 - Equipment Capabilities: Analysis / Feasibility NOTE : There are four significant technology considerations, with potential cost implications, to consider in the PSAP consolidation planning effort: E-911 phone audio logging; Radio system and console equipment, CAD and records management software tools, and Mobile Computing capabilities. Of these four key technology considerations the region is well positioned in 3 of the 4 areas to allow some form of technology consolidation. For the E-911 issue, opportunities exist for cost savings and platform standardization because many of the counties have not yet made upgrade investments. The radio system and console equipment area is for the most part standardized on the ARMER backbone with Motorola console equipment. Although the CAD environment is not standardized in the region, the CIS platform does serve 5 of the 11 counties. There are also 3 counties that have not made a significant CAD investment so the timing for consolidation may allow for savings in this area compared to each of these counties going it alone. The mobile computing / AVL environment is one area that will likely need significant investment to bring all users up to a common level of capability and also has a significant impact on the potential for service level improvements for dispatch and emergency responders in the region.

3.7 Physical Space / Facilities

During the site assessment visits an initial investigation was conducted of the primary physical space and facilities currently available to provide for the PSAP function. This included documenting the current physical spaces for the primary dispatch area plus associated spaces for equipment, supervisory staff, break room and locker storage space, restrooms, conference spaces, and other adjacent space. Other factors associated with the facilities such as availability of emergency uninterruptible and generator power sources, physical security, employee parking availability, and potential expansion space for future growth or hosting of a Consolidated PSAP were also investigated. The individual assessment reports for each center located in appendix A provide a detailed summary of the findings from these site visits.

Physical space is a primary cost consideration in the initial capital costs associated with creation of a consolidated PSAP environment. Some of the characteristics to consider in evaluation of locations and facilities for a new Consolidated PSAP include:

3.7.1 Building Options

Existing Site & Building - Use an existing site and building and adapt or expand it for use as a consolidated center. There are currently a number of the existing PSAPs that are viable candidates for expansion to accommodate some form of expansion to host a consolidated PSAP. There are also some candidate buildings that are not current PSAPs that can be evaluated and may be viable sites. The number of participating counties and ultimate size of the consolidated PSAP operation will determine which sites have the necessary space, security and support systems for a consolidated center. It is likely that this alternative would be the least costly approach to creation of a consolidated PSAP(s) in the region.

Existing Site & New Building - Use an existing site but build a new center. There may be existing sites within the region that meet the necessary requirements and which are currently owned by a government entity. This alternative would eliminate the cost and administrative process of purchasing land. However, there may be a tendency to compromise on site requirements to make use of current properties. Olmsted county has advised that there are current plans in place to construct a new fire station / PSAP facility. This new building could be a candidate for modification prior to construction to accommodate a consolidated regional PSAP.

New Site & New Building - Acquire a new site and build a new center. This alternative would likely be the most expensive, but would allow complete flexibility in choosing the most acceptable site and creating spaces designed specifically to meet the PSAP operational needs.

3.7.2 Site Characteristics

- **Size:** Any existing site will need to have enough space to accommodate the appropriate number of dispatch work stations and associated equipment, supervisory and support staff offices, break rooms, locker storage, and lavatory facilities. A newly designed space should be large enough to accommodate the main communication center building, for a separate structure housing an emergency generator, and underground fuel storage. It should also allow an area for parking employee cars, special vehicles (mobile EOC), and other vehicles and temporary structures required during a disaster.
- **Safety:** Any new site selected should be free from potential hazards, such as overhead power transmission lines, trees, flooding, brush fires, vehicle off-road accidents, underground pipelines, etc.
- **Access:** Existing or new sites selected for a consolidated PSAP should ideally be centrally located so all county agencies have short driving times to the center. It should be close to one or more major freeways or state highways. The roads leading to the center should be free of major potential obstructions in time of natural disaster.
- **Communications:** The ideal site should have current or easily-installed access to communications links, including the public telephone system, existing county and municipal radio links, microwave towers, etc. Redundant communication link connections are desirable.
- **Future Growth:** Upgrades to and existing site or development of a new site should be sized and arranged to allow future additions to the building to accommodate additional growth and the potential for additional future participants.
- **Utilities:** The center should have easily installed access to the existing public telephone system, water lines, power lines, and a sanitary sewer. The utilities should be arranged to enter the building in a place and method that will not create a hazard during any natural

disaster or the failure of any utility supporting structure. The building's critical electrical needs should be supplied through an uninterruptible power supply (UPS). The building's critical and necessary electrical needs should be supplemented with a backup generator.

- **Parking:** The site should be large enough to accommodate everyday employee parking, storage of specialized communications units (EOC vans), and staging of mutual aid support units during a multi-agency incident.

3.7.3 Center Layout and Furniture

The arrangement of the dispatch area should emphasize functionality, ease of communications and mirror the natural contacts that may be necessary between the various job positions.

The arrangement of operator workstations and other furniture and electronics in the dispatch area should take into consideration:

- necessity to communicate visually and verbally between dispatchers
- isolation of noise between adjacent positions
- adjacency to paper files or other reference sources
- adjacency to dispatching equipment
- glare from window or other openings
- communication center area traffic patterns
- other building traffic patterns

3.7.4 Security Considerations

- **Access Security:** An existing or new site should provide security to prevent unauthorized persons from entering the dispatch areas. Access should be controlled by a computer-controlled, keyless security system. The interior doors to the communication center area, the computer room, telephone equipment room and other sensitive areas should be protected by the keyless access system. The security system should allow an alarm to be sounded at a remote location during certain periods, when a specific person enters the room, or when other conditions are met.
- **Building Security:** Ideally a new site would be fenced and have landscape designed to minimize any hiding or blind spots where persons or vehicles are obscured from anyone inside the building, or by the building video surveillance system. Any associated antenna towers or structures should be located at a safe distance from the center building, so collapse of any structure would not strike the communications building. Consideration should be given to protecting any exposure (window, door, fan opening, etc.) from fires in adjacent buildings, brush or trees. Any public access should be designed to provide physical protection for the receptionist and to prevent visitors from leaving the reception area without authorization.
- **Computer Security:** All computer systems used in the building should be housed in secure areas not accessible to the public. All programs running dispatch-related programs shall be protected by a system of user names and passwords. The password system shall allow the system manager to designate how often passwords must be changed by individual users and their format (length, if letters and numbers required, etc.). All computer links leading out of the building should terminate at a secure location (firehouse, other communication center, etc.).

3.7.5 Additional Building Considerations

- **Lighting:** Center lighting circuitry should be arranged to prevent a lighting failure to any large area of the building. There should be overall and individual console lighting in the dispatching area. The console lighting should be individually controllable at each console. Overall lighting should be arranged to minimize glare on video display terminals.
- **Environmental Controls:** The building air conditioning system should be arranged to provide a sufficient flow of fresh--not recirculated--air to the dispatch area, to filter the air to remove possible contaminants including pollen, mold, dust and mildew, and to reduce drafts on employees. Temperature control should be available to authorized personnel, but the range should be limited so it always provides sufficient cooling for electronic equipment in the building. Consideration should be given to a positive pressure air system that keeps outside contaminants out.
- **Sound Control:** The dispatch area should have some method of sound control for reducing the volume of noise, echoes and other unwanted artifacts. Methods include acoustic tiles, carpets, wall curtains or other coverings.

3.7 - Physical Space/ facilities: Analysis / Feasibility NOTE : The facility and physical space requirements for the PSAP Consolidation can be a major cost consideration and can have a significant impact on the operations of the center. The site assessments identified several locations that present opportunities for expansion of existing spaces to accommodate a consolidated center. Planning for a new PSAP facility or expansion of an existing center should consider all aspects of the facility including the building site, the location within the region, security and access, center layout, utilities and redundant systems, etc. Once consolidation models are established that identify the alignment of the counties within the region and the staffing requirements of each PSAP consolidation scenario, more detailed planning regarding facility space and location needs can be done.

4.0 Feasibility of Consolidation – Political / Policy Maker Input

In conjunction with the site visits and staff interviews conducted at each existing PSAP, a more broad level of input was desired from other stakeholders throughout the region. Survey input was solicited via two independent survey documents. It is believed that early communication with those impacted by a potential PSAP consolidation can provide insight and some practical information about the feasibility and likely hood of success of a consolidation effort. It is also felt that early awareness and involvement in the PSAP consolidation planning process is an important factor in the success of this effort. Two surveys were created to capture input from key stakeholders. One survey was targeted at high level policy makers, elected officials, and managers. A second survey was directed at the first responder community. The survey content and responses are included is sections 3 and 4 of this report.

In order to successfully deliver the objectives outlined in this feasibility study, the Study Group was interested in input from public safety policy makers and leaders that will have direct decision making authority over the PSAP consolidation or shared services project. The survey below was developed, distributed, collected, and tabulated to gather political feasibility, obstacles, willingness, and pitfalls that make up the current political landscape. The policy survey questionnaire was distributed to county commissioners, city council members, sheriffs, police chiefs, fire chiefs and EMS managers.

There were a total of 70 responses received. The following is a summary/compilation of those survey responses.

4.1 Multi-Agency dispatch centers

This question asked if they currently operate dispatch services from a Multi-Agency Dispatch center. There were 66 of the 70 responses responding either 'yes' or 'no' with four 'no response'.

1. Yes – 27 (38.6%)
2. No – 39 (55.7%)
3. No response – 4 (5.7%)

The follow-up question concerned when the center began providing multi-agency shared services, specifically the year. Of the 27 'yes' responses the answers of several indicated that they did not know the year and the others indicated as far back as 1976 and everything in between up to within the last year. At least one of the 'no' responses could also be counted as a qualified 'yes'. The majority of responses indicated that they did not operate a multi-agency dispatch operation.

Following are the comments received:

- 1976
- Fillmore County Sheriff's Office, unknown
- We dispatch for Law (Sheriff, Police), Fire, Medial (Ambulance Services), and Emergency Services
- Before I started in 1988
- About 1990
- unsure
- Does this mean for agencies within the county, i.e. Fire Departments/City Police/Ambulance if it does then the answer is yes? It is still the Sheriff's Department Dispatch Center.
- I am responding for Lanesboro Ambulance service. We are dispatched from the Law Enforcement Center in Preston.
- I have been a police officer for over 30 years and the dispatch center has always been a multi-agency dispatch center.
- About 6 years ago
- unknown
- In December 2011 we started getting all medical calls dispatched from the Emergency Communications Center at Mayo Rochester.
- don't know these answers as I would be an Amb provider (customer to multi-agency dispatch center)
- Not sure
- We do not operate a multi agency dispatch center but are part of one.
- Dispatched via single county sheriff's dispatch.
- I do not know the year
- One dispatch for whole county.
- A long time ago

- No
- City of Austin, City of Grand Meadow, City of Adams, City of Brownsdale, City of Lyle and City of Mapleview
- Well before my start date.

4.2 City/County transition or merged dispatch center experience

This question asked whether the responder's City / County had transitioned or merged dispatch centers their career. 68 of the 70 indicated either 'yes' or 'no' with 2 'no response'.

1. Yes – 9 (12.9%)
2. No – 59 (84.3%)
3. No response – 2 (2.8%)

Here again, approximately 85% of the responses they had never been involved in any form of transitioned or merged dispatch centers. The general consensus for those with prior personal experience was relatively positive (see comments).

The follow up question asked for comments about what worked and did not work in their opinion. Below are the comments:

- What has worked is a central location for emergency calls to be channeled to. What has not worked is communication is a barrier during crisis situations.
- It is functional however there is much valuable information lost due to the large coverage area. Personal knowledge of the area and situation is an immeasurable asset.
- In our city the nursing home used to be our dispatch center. Several years ago the county has been the dispatch center and it's what we needed to do. Since Rural Addressing it's worked.
- We went from a private /city dispatch to county LEC
- Smooth consolidation. Expressed fears of reduced service did not materialize. Significant savings to the taxpayers resulted with an actual improvement in service delivery.
- Look at Anoka Counties Law/Fire dispatch center - very proficient handling thousands of calls. I believe each agency or city has a voice in operations and oversight however they are sheriff's employees??
- To my knowledge no city has ever had its own dispatch; they have always operated through the county.
- not that I am aware
- transitioned to county from local

4.3 People responding to the questionnaire by their position in relation to the PSAP

This question was asked to determine how each individual describe their position in relation to the PSAP. There was a fairly good distribution of responses with close to half from EMS Managers.

1. County Commissioner /City Council - 13 (18.6%)
2. Sheriff /Police Chief – 17 (24.3%)
3. Fire Chief – 12 (17.1%)

4. EMS Manager – 19 (27.1%)
5. Other – 9 (12.9%):
    a. PSAP Supervisor - 2
    b. Chief Deputy – 1
    c. Emergency Preparedness – 1
    d. Emergency Management – 1
    e. County Administrator – 1
    f. Dispatcher – 1
    g. EMBT Training Officer – 1
    h. Emergency Manager - 1

4.4 Most important criteria for determining success of PSAP consolidation

It was noted that a successful PSAP consolidation effort typically strives for some of the following major benefits: ongoing operational cost savings, operational efficiency, improved level of performance and service, enhanced technology. The survey asked to rate what they consider to be the most important criteria for determining success of a PSAP consolidation (1 being the highest priority, 5 being the lowest priority). The following shows the compiled rating of 69 responses with the lowest aggregate score having the highest priority:

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.	Highest Priority				Lowest Priority
	1	**2**	**3**	**4**	**5**
Improved efficiency	21 30%	27 39%	15 22%	6 9%	0 0%
Improved level of service	32 46%	26 38%	3 4%	5 7%	3 4%
Minimize Initial Cost Outlay	4 6%	4 6%	16 23%	16 23%	29 42%
Reduced Life Cycle/ Operational Costs	5 7%	3 4%	13 19%	28 41%	20 29%
Improved Technologies and Capabilities	7 10%	9 13%	22 32%	14 20%	17 25%

The following is a compiled ranking of the 69 responses. The lower the score indicated the highest priority.

1. Improved level of service – 1.86
2. Improved efficiency – 2.09
3. Improved Technologies and Capabilities – 3.36
4. Reduced Life Cycle/ Operational Costs – 3.80
5. Minimize Initial Cost Outlay – 3.90

This shows that the highest priority of the people responding definitely relates to improving the level of service and efficiency of the PSAP center operation. Minimizing the initial cost outlay ranked last followed by reducing life cycle/operational costs.

4.5 Interest in "hosting" a consolidated PSAP center

Here the question was asked to try to determine the interest in "hosting" a consolidated PSAP center in their jurisdiction. Each was asked to indicate which of the following 5 statements best fit their current thinking.

1. We have been exploring the possibility of consolidation and are ready to host or provide services to multiple counties or regionally – 2 (2.9%)
2. We have been considering consolidation and would host if it makes the most sense and is supported by others – 18 (25.7%)
3. We have not considered consolidation and have no preference or opposition to hosting – 12 (17.1%)
4. We are not interested in hosting a consolidated center and would retain our own current PSAP rather than join a center hosted by others – 6 (8.6%)
5. No opinion, I would defer to others for this decision – 31 (44.3%)
6. No response – 1 (1.4%)

Only 20 of the 70 responses indicated that they had been considering and would potentially agree to host. Another 12 indicated that they had not been considering but they had no preference or opposition to hosting.

The following 6 comments were received:

- Would we have a choice?
- Depends where
- Not a decision for me to make
- No opinion
- Possibly
- No Opinion

4.6 Ongoing interest in participating if another county is selected to "host"

This question explored the interest relative to participation if a consolidation effort is pursued and the determination is that the PSAP will be operated in a county other than your own, would they still be interested in participating in the consolidation effort.

1. Yes. If consolidation makes sense and the financial and governance issues are acceptable, we would join regardless of the physical location – 51 (72.9%)
2. No. Regardless of the PSAP consolidation details, we would only join if the PSAP were located in our jurisdiction – 13 (18.6%)
3. Other – 6 (8.5%)

There appears to be significant interest (72.9% of responses) in participating in a consolidated PSAP center regardless of physical location while are some (18.6% of responses) that would only be interested if it was located in their jurisdiction. The key is acceptance of the financial and governance issues regarding participation.

The follow comments were also received:

- It has to make fiscal sense to make the move towards consolidation.
- We really appreciate our nearly local dispatchers. They are particularly helpful in giving directions around the difficult geography of Fillmore County. Many times they even know the E-911 caller and can give us a "heads up" before we get on site.
- Placing this many eggs in one basket is not in good interests to our county or any of the counties listed. This will take away extremely valuable firsthand knowledge of many different scenes that we encounter on a day to day basis in our county. Having one person with one shovel disrupting the entire E-911 operations for this large of an area scares me to death. The dispatchers that we have are very good; they know the area and responding agencies' abilities. I don't like this idea at all.
- It would depend on the location of the newly consolidated PSAP.
- This would depend on the parameters that are set up for the center operation.
- The joint powers PSAP would be the best I believe. This gives everyone involved a voice and ability to work together. We currently have little voice in our dispatch center due to the sheriff's office operating it.
- Dispatching for too large of a geographical area becomes more difficult to know the area that they serve.
- But depends on a number of factors!

4.7 Constituent approval

The question was asked to gauge how heavily constituent approval would weigh into a decision to consolidate.

1. I must have strong consensus in order to support joining a consolidated PSAP – 17 (24.3%)
2. Constituent approval is important, but only to a point, if the decision makes fiscal and operational sense I will proceed – 38 (54.3%)
3. In this economic environment, if it can be shown to be cost effective and not diminish service levels, even with little constituent approval we must proceed – 12 (17.1%)
4. No response – 3 (4.3%)

Constituent approval weighs heavily on 17 of the 70 responses. Fifty of the 70 responses indicate that constituent approval would be good but not necessary if other circumstances such as cost and level of service consideration indicate it is the right thing to do.

The following comments were also received:

- I will support the Fillmore County dispatchers if they want to continue in their capacity. But, we answer E-911 calls and I suspect that neither Lanesboro Ambulance nor the Fillmore County Sheriff's office has much to say about this.
- no opinion
- These questions are all slanted for having a Joint PSAP. They are not very relevant for the many small volunteer emergency response agencies, which make up the majority of the EMS and Fire responders in the area. Cutting budgets does not always make the best sense; this will hurt the economies of the surrounding counties by taking away good paying middle class jobs, something that is very much needed in outstate Minnesota at this time.

- I think the people will understand with time, if they are against it for silo reasons. We must be as efficient and inventive as possible in these times.
- We would need to sell the concept if necessary.
- It would have to make fiscal sense. I've not seen any paperwork as of yet that shows a cost savings.

4.8 Interest in different styles of governance

The 2010 Minnesota Statute "Section 471.59 JOINT EXERCISE OF POWERS" defines a Joint Powers "Subdivision 1. Agreement" as:

"Two or more governmental units, by agreement entered into through action of their governing bodies, may jointly or cooperatively exercise any power common to the contracting parties or any similar powers, including those which are the same except for the territorial limits within which they may be exercised. The agreement may provide for the exercise of such powers by one or more of the participating governmental units on behalf of the other participating units. The term "governmental unit" as used in this section includes every city, county, town, school district, independent nonprofit firefighting corporation, other political subdivision of this or another state, another state, … and includes any instrumentality of a governmental unit. For the purpose of this section, an instrumentality of a governmental unit means an instrumentality having independent policy-making and appropriating authority."

This question wanted to find out if there was a preferred style of ownership/operation for a Consolidated PSAP.

1. Independently operated via multiagency joint powers agreement – 45 (64.3%)
2. Owner/operator arrangement where one agency owns and operates the PSAP center and contracts out services to other agencies for a fee – 9 (12.9%)
3. Privatized services – 4 (5.7%)
4. Other – 8 (11.4%)
5. No response – 4 (5.7%)

The issue of governance is not clear cut but there is a fairly strong leaning toward the joint powers form followed by the owner/operator and then privatized service model. The issue of what agency actually owns the consolidated PSAP facility needs to be factored into any governance decision.

The following two comments were received:

- No opinion
- The current county setup
- Not sure, whichever is the best model for what we are trying to accomplish.
- Would have to see what each concept looked like!
- Unsure
- I'm not informed enough to choose
- Joint powers agreement
- No fees

4.9 Approach to staff accommodations

Typically one advantage of a Consolidated PSAP is a reduction in total staff compliment compared to multiple independent centers. This question was asked to try to determine what would be the preferred approach to staff accommodations.

1. All existing staff should be offered the opportunity to transition to the new PSAP. Over time staff reductions can occur through attrition to obtain the desired level – 31 (44.3%)
2. Staff the new consolidated PSAP as appropriate and let each joining agency determine the disposition of current staff – 24 (34.3%)
3. Follow current bargaining unit agreements as required and staff the new center to meet its required compliment – 11 (15.7%)
4. Other – 3 (4.3%)
5. No response – 1 (1.4%)

There is a very strong interest in making sure that existing staff accommodations are taken into consideration. There is sentiment that all existing staff should be offered the opportunity to transition. There is also interest in letting the participating agencies make the decision regarding their own staff. The issue of bargaining unit agreements will also need to be addressed.

The following three comments were received:

- no opinion
- Keep things as they currently are now.
- Combination of offering existing staff opportunities & have local agency determine make-up.

4.10 Additional comments

Each of the respondents was asked to provide any additional information or comments that they would like to offer regarding PSAP Consolidation:

- Consolidation doesn't always equate to better service or lower cost. Unfortunately in government agencies it is usually a political smoke and mirror game with proponents slanting their numbers to push a pre-set agenda. It is very difficult to obtain unbiased information.
- Let’s keep jurisdictional politics out of it.
- Consolidation looks and sounds good on paper but being familiar with the areas is a serious issue, and any person would have difficulties even after a number of years of employment knowing a 4-6 County area. Everything and not just money needs to be taken into factor. It's hard to put a price on Public Safety until you really need it.
- With ever tightening budgets, Consolidation seems like the thing to do. With the technologies available both in PSAP centers and emergency vehicles there should be no problems with any emergency vehicle getting to the scene of an emergency in an appropriate amount of time.
- I see great advantages. But, I am not one who knows enough about this topic to make a solid case either way.

- During my 13 years as a fire/rescue member in SE MN, I have had calls in locations that no map has ever shown. These areas are known locally only. Having a consolidated dispatch that far removed from our protection district is dangerous and foolish. The technology may exist however how easily can it be disrupted, one bad storm or misplaced shovel.
- We need to proceed with caution and make sure it makes fiscal sense as well as provide the service we need. It is vital that we either increase or at least, maintain the current quality of service in the new model.
- This needs to continue moving forward, and as soon as practical.
- My experience with a consolidated dispatch has not been a very positive one. The biggest issue we face is the loss of service, lack of input and the issue of our community being unrepresented in the dispatch center.
- We would like to see better medical dispatching and training and hopefully a joint dispatch would better serve everyone. (Speaking as an EMS & Law provider). It would also allow for better service and flow of information if there were more dispatchers to handle all the calls versus a single dispatcher (at times) having to deal with everything.
- Comments for # 4 - I am of the opinion that our dispatch currently does a very good job. Maybe over a period of time changes may/can take place.
- Comments for # 5 - Willing to study concept but no rush to do anything.
- With a new facility on the way I don't see where we could save money unless we where the PSAP.
- None
- I wonder sometimes if things are getting overly complex, when with technology they should be getting less complex. We are talking about getting a person from point A to point B. Why that process is so costly...I'm not quite understanding I guess.
- If a joint PSAP occurs, everyone that is a stakeholder and receives the complaints from the citizens when their calls for service are not handled properly, need to have equal input so problems do not continue to occur.
- I think this survey should be taken by people that are more informed than a Fire Chief. I just talk on the radio, I don't know about staffing and consolidation.
- Due to the large rural population in southern Minn. I do not think consolidating would be a good idea. The dispatchers we have now know the area which can be very helpful in an emergency situation. If the responding agencies have a question on a location having a dispatch in another county could possibly slow response time down.
- I am happy with what we have today, so there would have to be real benefits (i.e., improved services) for me to supportive of a change.

4.11 Summary

The 70 responses represent a fairly good cross-section of multi-agency dispatch center experience. Only a few indicated that their city/county transitioned or merged during their career. The responses came from a good cross-section of elected commissioners or council members as well as law enforcement, fire, EMS managers, and emergency managers including PSAP supervisors. One county administrator also responded.

There appears to be some very strong support for further consideration of consolidation. The most sought after benefits are improved level of service and improved efficiency. The benefits to improved technologies and capabilities, reduced life cycle/operating costs and minimize initial cost outlay were considered high priority by some but overall scored the lowest.

Concerning the question of hosting, roughly 29% of the responses indicated that they were considering it and would potentially agree to host. Another 17% indicated that they had not been considering but they had no preference or opposition to hosting. Another 44% indicated that they would defer the decision to someone else. 9% indicated that they were not interested in hosting a consolidated center and would retain our own current PSAP rather than join a center hosted by others.

The majority of responses, or roughly 73%, indicated a significant interest in participating in a consolidated PSAP center regardless of physical location. A fewer number of responses, about 19%, indicated that they would only be interested if it was located in their jurisdiction. The key for all responses seemed to be the acceptance of the financial and governance issues regarding participation.

There were 3 'No response' out of the 70 returned and all of the ones that did respond indicated that constituent approval definitely would play a part in any final decisions. However, only about 24% indicated that constituent approval was a definite must for further consolidation consideration. About 71% of the responses indicate that constituent approval would be good but not necessary if other circumstances such as cost and level of service consideration indicate it is the right thing to do.

The issue of governance is not clear cut but there is a fairly strong leaning toward the joint powers form with about 64% favoring followed by the owner/operator at about 13% and then privatized service model at roughly 6%. About 17% indicated 'Other' or 'No response'. The issue of what agency actually owns the consolidated PSAP facility needs to be factored into any governance decision.

Concerning the issue of staffing, there is a very strong interest in making sure that existing staff accommodations are taken into consideration. There is sentiment that all existing staff should be offered the opportunity to transition. There is also interest in letting the participating agencies make the decision regarding their own staff. The issue of bargaining unit agreements will also need to be addressed.

All in all, there seems to be fairly strong interest in continuing to look at the potential for consolidation. The telling tale is in the comments that note that there are some serious issues and some serious dissension. These issues and concerns will need to be addressed in Phase 2.

4 – Feasibility of Consolidation – Political/Policy Maker Input: Analysis / Feasibility
NOTE: Overall there seems to be significant support for some form of consolidation. Survey responses showed a strong willingness at the leadership level to further consider consolidation of PSAP services, and also revealed that the physical location of the consolidated PSAP is not a significant factor in a decision to participate. Less than a third of respondents indicated that they were considering hosting the consolidated PSAP and the vast majority said that if financial and governance issues are acceptable they would participate no matter where the PSAP is located. Constituent approval was cited as a must by about 24% of respondents, but more than half said they would proceed if the consolidation makes fiscal and operational sense.

The potential to improve PSAP service levels and efficiencies are clearly the most desired benefits of consolidation, followed by improvement of technology and PSAP capabilities. Reducing on-going operational costs and minimizing the required initial cost outlay to consolidate were also identified as important criteria in determining the success of the consolidated PSAP.

An independently operated PSAP organized as a joint powers entity was the preference of over 64% of respondents, with 13% preferring a PSAP run by a single agency and serves other jurisdictions on a fee-for-service basis. Staff accommodation preferences were more evenly divided, with 44% favoring retention of all incumbent staff and 34% favoring staffing the new PSAP as appropriate and letting each agency determine the disposition of current staff.

While the survey revealed clear preferences in many of the key consolidation topics, it also revealed strongly held opinions in dissent of the majority views. If the process is to move forward, it will be crucial to develop decision making processes that acknowledge all points of view and define the process for making higher level governance and policy decisions.

5.0 Feasibility of Consolidation – First Responder Input

In order to gather input from public safety professionals and first responders that are the primary providers and recipients of service from the current 10 PSAPs, the following survey was distributed.

The survey was developed, distributed, collected, and tabulated to gather input concerning feasibility, obstacles, willingness, and pitfalls that make up the current landscape. The first responder feasibility survey questionnaire was distributed to dispatchers, law enforcement officers, fire personnel, EMS personnel, public works/highway personnel, and others.

There were a total of 85 responses received. The following is a summary/compilation of those survey responses.

5.1 Multi-Agency dispatch centers

This question was intended to find out where each survey responder currently receives dispatch services from a Multi-Agency Dispatch center. Of the 85 total responses received some indicated 'yes' and.

1. Yes - 45 (52.9%)
2. No - 39 (45.9%)
3. No response – 1 (1.2%)

The responses were fairly evenly split between those receiving from a multi-agency dispatch center and those that are not. The second part of this question was an effort to get a feeling for when the center began providing multi-agency shared services, specifically the year.

The following 12 comments were received:

- Olmsted co
- 1999
- ???1997??? Mayo Emergency Communications Center [ECC] dispatches EMS in Rochester...Duluth...St Cloud...Fairmont...Mankato...Austin...Owatonna... etc... as well as Helicopter EMS in Rochester / Mankato / Eau Claire plus they have done some outside entities
- 2000
- In the mid-70's when "E-911" went into effect.
- 2001 I think
- Not quite sure when this started. Winona Co dispatches for all Fire, EMS and police in Winona Co
- Not sure of the year
- Don't know... before my time
- 1999
- Do not know the year
- no idea
- Approx. 1997
- 1999 I believe.
- 10 years ago
- 1980s

- I don't know when we started.
- prior to my employment in 1998
- I do not know when they started. Olmsted/Rochester.
- Two agencies. Not sure when started. 30+ years at least
- No
- I believe it was early to mid 90's
- Pre 1984.
- Unk
- about 1992
- No idea when services began to be shared.
- not sure
- Rochester PD, Olmsted Co So, & Rochester Fire. Pd and So have always been combined. Added Fire about 15 years ago.
- No

5.2 Experience with transitioned or merged dispatch centers

The question is intended to get an indication of how many individuals were with an agency when that agency transitioned or merged dispatch centers. In most cases they indicated they were not:

1. Yes – 15 (17.6%)
2. No – 69 (81.2%)
3. No response – 1 (1.2%)

The overwhelming majority do not have any experience with a merged dispatch center. The few that did and answered 'yes' were asked to please provide comments about what worked and did not work in their opinion.

- I was not employed here at that time
- Actually more like 'grew into' a multi location dispatch center. Individual nuances in particular towns/locations require a learning curve, but were actually assimilated quite easily in the long run. I assume there are issues with people using regional terminology about a certain intersection or site that may be confusing to dispatch unaware of the local term of identifying the site.
- Nothing works. Customer service is lacking, the dispatch center administration does not seem to want to work cooperatively with the agencies, but wants to do things their way. Having so many agencies involved with their own policies, procedures, and customs creates consistency issues. A consolidated dispatch forces agencies to comply with their standards, even though it may be inconsistent with agency best practices. The call-taker / dispatcher system also created unacceptable delays.
- On two occasions, one in Rice and the other in McLeod County. The key to success is communication. Continuing discussion on issues, and there are issues, is key. Also allowing end users a voice. When the center is run and directed by elected officials (city council and county boards) and not public safety personnel, this is problematic.
- Over the years while I was in law enforcement the dispatch center managed the call volume and I felt very connected to the dispatchers.

- I dispatch for Mayo Clinic Medical transport. Yes, we have brought on new services since I have been employed. Careflight air service and Albert Lea Ambulance.
- FROM A RESPONSE SIDE, IT HAS NOT WORKED. LESS INFORMATION, POOR DISPATCH INFORMATION, AT A MUCH HIGHER COST.
- Lack of understanding of how scenes are run. Lack of understanding of how the daily tests should be conducted. Lack of control from our viewpoint and unresponsiveness when issues arise! (NO ACCOUNTABILITY!) The inability of two persons sitting a few feet apart to communicate with each other. We have seen this work both directions when working with RPD members on scenes. At times it will take several minutes for one agency to receive the same information the other agency received.
- Added Chatfield Police and multiple small city EMS units. Radio use protocol had to be trained and updated.
- The fire Dept. combined with police and sheriffs Depts. The dispatchers cannot know each department's resources and policies as well as members do. As a result they have to work from guidelines built into the system which while they often work during bigger incidents the incident commanders need to intervene and make dispatch decisions when they are committed to an incident. Another problem is the agencies with lower call volume can feel like they are lower priority and their needs are not met.
- Added Fire to the dispatch responsibilities. Fire did provide a dispatch liaison for a considerable amount of time to train. Most of the administrative/non dispatch responsibilities that were initially required are no longer a dispatch responsibility.
- We have merged several years ago. Would I recommend it? No.
- I have seen this a couple of times, but not while I as with the agency.

5.3 Relationship to current PSAP

In an effort to find out who was responding, the question was asked which of the following best describes your current relationship to the PSAP. The following summarizes the responses:

1. Dispatcher – 17 (20.0%)
2. Law Enforcement - 34 (40.0%)
3. Fire Responder – 15 (17.6%)
4. Ambulance Service – 4 (4.7%)
5. Public Works/Highway – 0 (0.0%)
6. Other – 14 (16.5%)
7. No response – 1 (1.2%)

The 14 survey responses that listed themselves as 'other' noted the following:

- PSAP admin
- Helicopter EMS
- fire department / first responder
- Dispatch Supervisor - 2
- Fire - Rescue
- fire department
- first responder

- Fire and EMT
- Fire and ambulance - 2
- RFD EMT/First Responder
- Fire Fighter EMT
- Fire Dept

There is a good distribution of responses from PSAP personnel with the exception of public works/highway group. If you combine the fire responder and ambulance and add in those that marked 'other' but listed that comparable roles it would appear that this group represents the majority followed by law enforcement and then dispatchers.

5.4 Years of service

This question asked for how many years of service.

1. 0-5 Years – 10 (11.8%)
2. 5-10 Years – 19 (22.3%)
3. 10-15 Years – 16 (18.8%)
4. 15-20 Years – 10 (11.8%)
5. More than 20 years – 29 (34.1)
6. No response – 1 (1.2%)

Here again the years of service is fairly evenly distributed with responses from folks just starting out to those that have more than 20 years on the job.

5.5 Current technology elements

This question was an effort to determine what specific technologies their current PSAP center has. Only 81 responded to this question.

1. Mobile data – 58 (71.6%)
2. Automatic Vehicle Location (AVL) – 37 (45.6%)
3. Records management software - 58 (71.6%)
4. Computer Aided Dispatch (CAD) – 68 (84.0%)
5. In vehicle mapping / route guidance – 27 (33.3%)
6. AMER 800 MHz radio system – 42 (51.9%)

The majority of those responding indicated that their PSAP center currently has CAD, mobile data and records management software. About half indicated they are on an 800MHz radio system, a little less than half have AVL and only about a third currently have in vehicle mapping/route guidance.

5.6 Are these elements necessary, nice to have, or unnecessary?

The follow up question was used to try to establish a relative value for each technology. Here there were 85 responses:

1. Necessary – 57 (67.1%)
2. "Nice to Have" – 20 (23.5%)
3. Unnecessary – 5 (5.9%)

4. Other or no response – 3 (3.5%)

In this case over 90% indicated that the technologies listed in 4.5 were either necessary or nice to have. A very small minority stated that they thought these were unnecessary.

5.7 A. Knowledge or familiarity of the service level and lack of relationship with emergency responders

Historically, consolidating a PSAP raises concern over diminished service due to dispatchers having inconsistent knowledge or familiarity of the service area and a lack of relationship with emergency responders. This question was to determine if this view is widely held.

1. Yes – 67 (78.8%)
2. No – 14 (16.5%)
3. No response – 4 (4.7%)

This question brought out some very strong feelings on both sides of the issue. The majority said yes to having concerns over diminished service because of dispatchers not knowing the service area that well under a consolidation scenario.

This question created several comments noted as follows:

- Yes
- It is a definite issue. That said, if the issue is addressed head on, issues can be mitigated relatively easily and an improved system results in both the PSAP and for the emergency responders. High standards can be established, and fostered to the improvement of the entire system.
- We have dispatchers that cover two counties, and live elsewhere. There are often issues with officers from the wrong jurisdiction sent to an address. There are also accountability issues with dispatchers. Since they are not employed by one agency, but rather a joint powers board, we have no recourse regarding complaints, discipline, etc. The dispatch center administration is not responsive to complaints.
- It is highly shown already just with the Rice/Steele County Dispatch Center that the dispatchers do not know the cities they do not live in when they dispatch for the cities they do not. The dispatcher will not know locations or landmarks and in high stress situations that is all the Officer may have time to call out and then the dispatcher is on the air barking out they need street information and it is the last thing an Officer needs a that critical time.
- When dispatchers know where we are going because they are familiar with the address they say it. Example, they'll tell us McDonalds instead of XXX 4th St. NW.
- When you have a dispatcher that is familiar with the area, this also can help calm a caller down in an emergency. If they are talking to a dispatcher that has no idea where they are sending an officer, I have heard the caller's frustrations when they are trying to explain something.
- I do think this is a problem. There are things that can help. Ride Alongs by dispatchers, and dispatchers not bouncing around, working the same area is helpful.
- We have already seen a increase time from receiving the E-911 call and dispatch since our county has starting using the mayo ECC system.
- I believe Winona Co would be foolish in consolidating their dispatch center into a regional center. Winona Co dispatchers have a vast knowledge of their geographic area.

A lot of the locations don't have addresses; it is done by knowing the area. Winona Co dispatchers do so much more than just "dispatching". They do enter and cancel warrants, assist the jail with doors and assist the public with their needs as well.

- Our area is very difficult to dispatch. Without some knowledge of the surrounding area, wrong services may be sent when the service needed is never paged. This has already happened here many times with newer dispatchers.
- I work at the hospital and I have seen the issues that come from WAAS being dispatched by GL dispatchers who do not know Winona County. There have been wrong addresses given and road names mispronounced, and in a true emergency this could mean the difference between life and death due to time lost. I believe that having a multi area dispatch center would exacerbate this problem.
- in our very rural area it is vital that the dispatchers have knowledge of the area they are dispatching responders to. many times they guide is to the patients location saving precious time
- Many of the dispatchers came from the time when the dispatch was in our area and are familiar with the local people and the locations. You can easily tell which dispatcher is not familiar with the area.
- Bad idea
- I believe that we have to look to the future. However, when it comes to safety, medical I expect well trained professionals who are very familiar with the terrain, area and will expedite services that will help speed up a response.
- No and Yes because at times it is difficult to know what is going on in the different cities.
- Lack of relationship makes it difficult.
- ALL ARE TRUE, HAVE NOT HEARD OF A COMBINED DISPATCH THAT HAS OFFERED THE QUALTY OF SERVICE A SINGLE AGENCY DISPATCHED OFFERED
- I've spoken to officers that work under the Dakota County dispatch center and this has been a huge problem.
- If a dispatcher does not know the community it can lead to delayed response for EMS police and fire.
- Being familiar with how things are run along with the area aids GREATLY in the ability to operate in an efficient manner. This also aids greatly in the safety of those responding!!! Understanding the terminology and "lingo" that is used is important to the overall efficiency and safety of those responding to various emergency scenes!
- If the individual city records storage can be accessed by all users, the information would be up to speed in a short period.
- It is real not just a concern
- I don't believe service will change due to these factors
- That is way too large an area for anyone to become familiar with.
- I feel it is vital that all organizations involved have same standard operating procedures and not require variations of procedures. This will ensure a quality of dispatch.
- Not today. Needing to know who lived in the house 25 years ago is not as important.

5.8 If "yes" to A. tools that aid in resolution of this issue

If the answer was 'yes' to the above then they were asked if any if they believed any of the following tools aid in resolution of this issue. They were asked to select all that applied. Of the 67 that said 'yes' and the 4 'No response' for a total of 71 responded as follows:

1. Improved technology (Mapping, AVL, CAD) – 45 (63-3%)
2. Additional training for dispatchers and responders – 49 (69.0%)
3. Increased staffing levels in dispatch – 46 (64.8%)
4. Other – 15 (21.1%)

The responses were fairly evenly split in that improved technology, additional training and increased staffing would aid in the resolution of the issue raised in 4.7.

The 'other' tools suggested were noted as follows:

- See Comment
- Riding along with each jurisdiction
- See below
- See comments
- Ride Alongs
- you can be responsible for too much area to be covered
- keep it local
- Riding with the departments
- see comment below
- Do not consolidate
- None
- Dispatchers with knowledge of area
- See below
- None
- Personal relationships make the biggest difference

This question also received the following 25 comments:

- Development and Training may be ongoing or continuous, and may be a cornerstone to the success of an integrated system. You really can't afford to have an Integrated PSAP be the weakest link as far as quality personnel employed.
- FR's need some "attachment" to written or printed calls, map directions, and radio communications with other agencies (even if just to monitor a channel
- The issues we experience cannot be resolved by technology. They are people issues
- Work primarily with the same departments as a dispatcher.
- The dispatchers should not work the radio for the city they do not live in unless they can pass a test for each city regarding city locations and information in regards to that city.
- I would not support a regional dispatch in any way shape or form. It is important for the dispatchers to be very familiar with the area the cover.
- There is nothing like local people to work with that know you and can resolve any problem in an efficient manner.

- No one can be expected to have intimate knowledge of an area that they do not know. The person needs to know the "other" names of certain locations, not because the police are resistant to change, but these are the little things the public commonly refer to them by and without someone that knows these places, response is severely hampered.
- Again I feel consolidating dispatch centers is a foolish move. If you are trying to save money there is other means to doing this. Why not do away with State Patrol and have those Counties take over their jurisdiction. That is just to name one.
- I still feel that it's hard to replace the personal knowledge and human adjustments that a dispatcher can make to mapping, conditions etc. that technology can't mimic.
- Maps really do not help in our rural setting. No road is straight, there is no grid system for roads and we have way too many road names that are similar. We share boarders with 6 counties and 1 other state. All too often a call goes to the wrong county or state but that county also has the same road. It takes local knowledge to determine that the call needs to go somewhere else.
- I believe that some improvement could be made by improved technology and additional training, but I still believe that nothing can replace the knowledge and commitment that is gained by living in the area you serve.
- technology can help but nothing takes the place of a dispatcher having on the ground knowledge of the service area
- If our dispatchers are moved and not removed then we still get the same service even though they report to a different job location. Otherwise, new people are going to have to have training in geography.
- I think the dispatchers should spend more time riding with the officers in the areas they are unfamiliar with so they get a "feel" for the city. They should also see how hectic some things can be so when we ask them to do things for us that we are also able to do from the cars, they understand that at times we don't have the time to do it, or that it would be unsafe to leave or take eyes off the situation to do it ourselves.
- Bigger isn't always better this consolidation is also going to cost millions of dollars for what? If it's not broke don't fix it
- Technology is great and needed but can never replace the human being behind the radio who has a interest in keeping EMS/Police/Fire safe.
- these aid but never will take the place of local knowledge
- Dispatchers should come out and work in the field with responders more often.
- No
- Dispatchers would really have to be more in tune to what is going on than they are presently. I would have concerns about the lack of familiarity of other cities/jurisdictions
- INCREASE STAFF THAT ARE CURRENT FIRST RESPONDERS OR HAVE AFIRST RESPONDER BACKGROUND
- I don't know if you will ever get this issue totally resolved but the above tools certainly help.
- No When someone uses local terms To describe Where is incident happen Technology will not overcome that It will take more time For the dispatcher to figure out Where is the incident is at 1 cannot expect a dispatcher to be familiar with an 11 county area.
- I believe all of these items can help to a certain degree, BUT they are not a replacement for intimate knowledge and understanding of how each department operates. These things only increase efficiency; however they do not make responder's jobs safer.

5.9 Top three issues or concerns

As part of the survey each individual that responded was asked to list their top 3 concerns with consolidated PSAP center(s) in their specific region. Of the 85 that returned the questionnaire there were 57 comments. The following are those comments:

- This large of a change to many opinions and personal agendas.
- Location of the center in proximity to my current location. Level of service. Command structure
- 1. Preplanning and establishment of high standards that PSAP and Responders agree meet their goals of quality
  2. Development and Training of personnel in the PSAP as well as the Responders, so that all know the system / expectations, and have 'buy-in' a positive outcome
  3. Superiority or priority expectations of individuals or departments / areas
- Location
  Mapping
  Keeping the staff we have
  Training
  First responder concerns for the service
- Lack of employee supervision / accountability.
  Lack of training.
  Lack of geographical knowledge by dispatchers.
- Lack of knowledge by dispatchers the current dispatchers believe the Officers should not be asking for assistance checking DL's and information. They claim Officers have computers in the squad and the dispatchers should not be required to do the checks. They do not take into account that Officers are out of their squads doing their job.
- 1. Politics!
  2. Politics!
  3. Politics!
- Loss of jobs for current staff.
  If there is a consolidated PSAP, there needs to be an understanding from all groups that operations need to be standardized and done the same everywhere.
  If a consolidated PSAP is done, there needs to be a common platform of technology for all services served by the PSAP
- Unfamiliar territory
  Confusion
  Relationships between officers and dispatch
- Delayed dispatch
  Wrong service dispatched
  Lose of the ability to have concerns addressed with dispatch.
- Keep it local!
- Lack of familiarity of the area dispatched, no voice for end users, and a take it or leave it attitude.
- Dispatchers not being familiar with our territory especially when we are in a very rural setting
  Dispatchers losing jobs
  Communications become worse

- Dispatchers not from the area will not know the geographical area as well as local personal.
  Mass communication issues from having too much on the docket could be an issue.
  Miscommunication to local entities.
- Knowledge of the area.
  Job loss to great dispatchers.
  Winona Co dispatchers do so much more then dispatching. They provide other services and needs to the community
- Our dispatchers are often saying they are too busy to do simple things they have always done for us in the past.
- 1)relationship
  2)personal knowledge of area
  3)lack of concern, respect for the job when dispatching is done as I call "out of house"
- JOB LOSS. This would move jobs from local economies.
  Slow dispatch times. Calls come in to someone who has no clue where to look to see who to send. Cell calls come in with local names for areas and not mile marker numbers or specific mapped locations.
  Deaths. Public, police, Firefighter, may be caught without help. No one knows where they are.
- Trying to decipher wrong addresses and mispronounced names in an emergency situation that could lose us time the pt may not have.
  Delays in dispatch trying to determine what the exact location is when they do not know the area.
  Poor reception in valleys and behind bluffs when this is already an issue with calls being dispatched locally.
- The officers and deputies use dispatch as a tool - one on one
  most of the dispatchers are from here so it makes it easier to know the area
  I think it would be hard to dispatch for an area where you have never been
- 1. radio channels being too busy
  2.
- dispatchers not being familiar with the service area losing the excellent dispatchers we now have due to commuting requirements to a new center
  time lost trying to locate patients when ambulance services/first responders have to try and navigate without the aid of dispatch
- Dispatcher's knowledge of the area
  Dispatcher's knowledge of local issues
- Lack of service and knowledge of the area
- 1. inconsistent knowledge or familiarity of the service area and a lack of relationship with emergency responders
  2. inconsistent knowledge or familiarity of the service area and a lack of relationship with emergency responders
  3. inconsistent knowledge or familiarity of the service area and a lack of relationship with emergency responders
- Not familiar with the city.
  Loss of relationship with the officers (face to face contact.
  Not being able to see/hear about how things are for us on the street so they better understand why we sometimes ask them to do things for us

- Not local service
  costs more to run and start up
  lost jobs locally
- Dispatch knowledge (Or lack of knowledge) of the area they dispatch.
  Response/dispatch Time
  Diminished service to the citizens
- Not a single chain of command due to each agency wanting representation.
  Dispatch oversight by individuals not familiar with the needs and requirements of dispatch.
  Lack of information and updates to the individuals (dispatchers) impacted by any change.
- Loss of service
  Delay implementing new programs such as EMD
- Not familiar with area.
  Past history indicates that rural areas are left out.
  It does not seem reasonable that a dispatch center 2-3 counties away can be effective in giving calls to police/fire in an emergency.
- -much larger area to become familiar with
  -breakdown in standard of care/response or loss of empathy for callers
  -driving distance to work and possibility of losing employment
- Lowered level of service- our center does many things no other center does.
  No local service point for residents.
  Dispatchers will be unfamiliar with the area they will serve.
- 1. Money will it save money?
  2. Location, where will the center be located?
- Top 3 would be:
  Is the PSAP going to be centrally located? Is the PSAP going to have enough resources to handle the load? What is the work load going to be? At times Work load is difficult.
- Life Safety of Officers & Citizens
  Dispatcher knowledge of area & job
  Adequate, consistent, legitimate policy, procedure & Leadership
- 1. Dispatcher's lack of training and accountability
  2. Poor administration in our PSAP Center
  3. Lack of relationship between dispatchers and responders
- Quality of service to the public and first responders if two big of an area to cover many areas 2 or 3 counties compared to dispatching.
- Possible loss of jobs.
  Not familiar with the area you are dispatching for.
  Too many politics involved.
- Lack of responsiveness to the individual agency
- lack of accountability
  Forgetting that dispatch is a support function
- Transition from disparate radio systems and CAD/RMS systems to a consolidated system. Many agencies will strenuously resist these changes.
- Lack of knowledge/information of the area they serve. Being able to get on the radio timely. Dispatchers being on their game, not sending wrong cars to wrong calls.

- POOR STAFFING LEVELS
  UNTRAINED OR STAFF UNFAMILIAR WITH REGION OR RESPONSE PROTOCOLS
  INCREASE COSTS
- Properly managing all areas consistently
  Knowledge of areas
- 1. Just as question #7 states, the possibility of diminished service due to inconsistent knowledge and lack of familiarity with the service area.
  2. Question as to necessity. Would a consolidated dispatch center actually save money?
  3. Various law enforcement software - which agencies would be expected to switch - compatibility issues... etc.
- 1. Differences in procedures between jurisdictions
  2. Lack of accountability when dispatchers are not local
  3. Increased response time due to lack of knowledge of area
- Lack of consistency between calls/ dispatchers.
- 1) Reduction of efficiency
  2) Reduction of safety for the responders
  3) Reduction of service provided to our customers (Public)
- Customer service. This is not all about money. The people I know that actually "work" in a consolidated center, not admin, but really WORK, do not like it and feel they do not serve the public in the best way.
- transition time. cost. protocol.
- Delays in dispatch, and missing or inaccurate info.
- 1. Smooth transitioning from multiple centers into 1.
  2. Fire dispatchers and police dispatchers able to effectively communicate QUICKLY back and forth.
  3. Dispatchers inexperienced and unfamiliar with all of the different locals SOP's, equipment and resources available.
- acceptance, efficiency, cost savings
- None
- Loss of control over the PSAP to have it tailored to fit an agency's specific needs, i.e., the PSAP tells you what they will do for you instead of the agency telling the PSAP what it needs.
- Lack of ability to have problems addressed.
  Unaccountability to the end users.
  Increased cost down the road to users.

5.10 Additional comments

Finally, each survey responder was asked to provide any additional comments about consolidated PSAP centers. The following are the 26 responses received:

- I can see maybe two or three counties come together but 11 counties are too much
- Based on my experience working with a traditional PSAP and a consolidated PSAP, I could not in good conscience recommend consolidation. Consolidation is looked at as a way to save money, but intangibles suffer: communication, relationships, officer safety and customer service have all diminished. Unfortunately I do not see a way to recover these.

- I like being familiar with our dispatchers because we know what to expect from them
- I would rather see separate dispatch centers that share technology. That would cut the cost and you still would get the personal service that the public is used to.
- see above comments...If Mayo ECC is an example NO WAY.
- Keep it local!
- I do not think it would be beneficial to our county at all.
- Although probably a good idea it will take emergency personal some time to get used to the idea of working with several different people involved in the system causing more issues than we have currently. You will find that elder emergency personal will answer differently than members just starting out in the emergency service.
- I feel this should not be done. So we are spending MILLIONS of tax payer dollars to fund all these counties with the 800 mgz upgrade then turn around a few years later and consolidation them. Makes no sense PERIOD. I think the government needs to get their priorities in check and look at other ways to save money at the at the expense of E-911
- In my opinion as Chief of a Fire Department that there would be a all around larger safety issue, and problems that a large multi county dispatch would cause then worth the money savings. It's a large benefit to have a local dispatch that knows, cares, has relations with, and feel comfort from do to the caring that we have received from our dispatch
- Our current centers are staffed with local people who know the area and know the agencies being dispatched. Consolidating dispatch in SE. MN would be very difficult given the diverse terrain throughout the many counties in question. Winona, Wabasha and Houston are full of river valleys. Olmsted is more flat.
- I understand the need to save money and that consolidation is a consideration, but I still think that our primary concern needs to be the health and welfare of our counties families, friends and neighbors
- Our area is already struggling with the change to 800 mhz due to the terrain of the bluffs. In some areas communication will become worse with this change. If we add to that dispatchers who have no idea what our service area looks like and have no idea of where an address is at it will directly impact the quality of patient care we can provide
- I like the concept, but I really think it limits the interaction between them and the officers they are supporting. Without a personal relationship disputes are harder to resolve and hard feelings can come from the anonymity
- stupid idea to consolidate leave what we have alone
- bad idea
- It seems that contemplating having a regional dispatch will save money. What are we trying to accomplish. You cannot convince me that dispatchers located in other counties can be effective pertaining to emergencies.
- I think it is a good Idea if it is done correctly. A good situation would be to look at Dakota CO.
- The consolidated Disp did less than they did before. Dispatchers state they are unable to do things because they are too busy, overworked & understaffed. This is not safe or conducive to an appropriate Dispatch Center. Very little shared communication efforts & unwillingness to work together. Past & current experiences are not favorable.
- I believe that when managed properly, they could work. Ours is very frustrating to work with. (Pearl Street)
- First responders need to have input of what should be done.

- They aren't all bad, but they aren't all good. I like the idea of keeping the dispatch in the location it is currently in, but then sharing the costs of the technology that is available.
- THEY HAVE YET TO PROVE INCRESE EFFICENCY AND HAVE ALWAYS ADDED COSTS.
- We have difficulty of times getting our two agencies to agree and procedural issues. I fear it would take forever for 11 counties to agree on procedures
- The bigger you make the PSAP the more you will have these problems.
- I think it's a bad idea consolidating too many agencies.

5.11 Summary

With 85 total responses there was a good cross-section of first responders. Slightly over 50% indicated that they currently receive dispatch from a multi-agency dispatch center. Over 80% indicated that their agency has never transitioned or merged dispatch centers during their careers. On the job experience was across the board with some just beginning through those with more than 20 years. 65% of the responses indicated over 10 years on the job.

It also appears that most agencies have adopted and are currently using advanced technologies in their dispatch operation. The majority of those responding indicated that their PSAP center currently has CAD, mobile data and records management software. About half indicated they are on an 800MHz radio system, a little less than half have AVL in their vehicles and only about a third currently have in-vehicle mapping/route guidance. Most, about 67% thought these were necessary and another 24% thought they were 'nice to have'.

The biggest concern expressed by close to 80% of those responding related to diminished service due to dispatchers having inconsistent knowledge or familiarity of the service area and lack of relationship with emergency responders. Only about 16%disagreed. For those that said yes, they were pretty consistent with 60% to 70% indicating that improved technology, additional training and increased staffing would aid in resolution of this issue. They also indicated in their comments other mitigation efforts that would aid in resolution of this issue.

When asked to name their 3 biggest concerns or issues, 57 responded with comments. When asked if they had any additional comments about consolidated PSAP centers, 26 responded with comments.

Looking at the overall procure from the first responders there appears to be sentiment against a consolidation effort. The concerns and issues expressed centered on dispatchers knowledge of the area and relationships with first responders. Technology offered some hope but there was still an expression that it would not overcome that "people" factor. Concerns were also expressed relative to staffing, level of service, training or lack thereof, accountability, chain of command, and several others.

5 – Feasibility of Consolidation – First responders Input: Analysis / Feasibility NOTE: As may be expected, there is much more reluctance to change from the first responder community. However, 45.9% of first responders indicated that their PSAP service is not multi-agency, in spite of the fact that all PSAPs in the study area are currently multi-agency. This may be due to the fact that most counties in the study area moved to county-wide dispatch services prior to the employment of most current responders. The application of some technology advancements (CAD, mobile data and records management software, 800MHz radio, AVL and in-vehicle/route guidance) are perceived by the majority to be

"necessary" while some thought they were "nice to have". By far the biggest concerns focused on the potential of diminished service due to dispatchers' unfamiliarity with the service area and relationships. Nearly 4 out of 5 first responders indicated that the local knowledge of the service area and a working relationship with first responders was important for dispatchers. These respondents indicated that local knowledge and responder familiarity in the consolidated PSAP could be improved with technology such as mapping, AVL and CAD (63%), additional dispatcher and responder training (69%) increased staffing levels in the PSAP (65%) and other measures such as dispatch ride-alongs. There were also concerns related to staffing, overall level of service, training or lack thereof, accountability, chain of command to list a few. Even with this somewhat anti-consolidation sentiment, there is a thread that given the right transition process and addressing concerns that consolidation may indeed be workable.

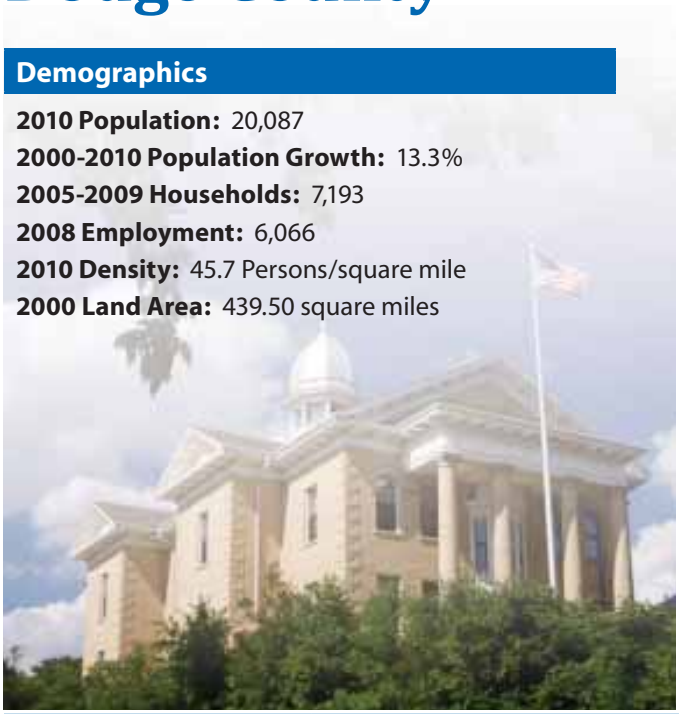
Appendix A

PSAP Site Assessment Summaries

This appendix includes “PSAP Site Assessment Summaries” from the existing 10 PSAPs in the 11 county region.

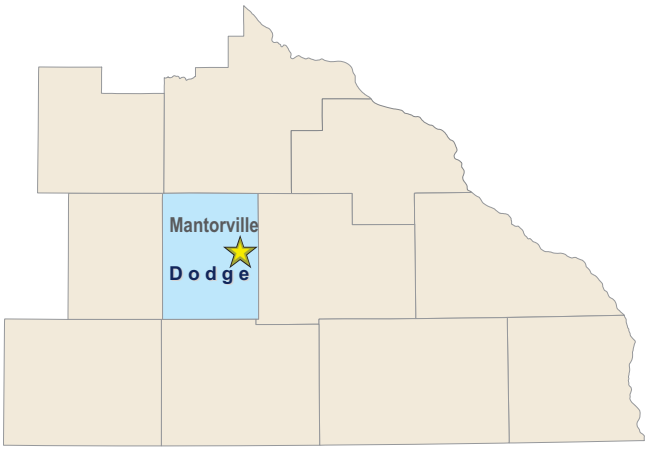
PSAP Site Assessment Summary

Dodge County



Demographics

2010 Population: 20,087
2000-2010 Population Growth: 13.3%
2005-2009 Households: 7,193
2008 Employment: 6,066
2010 Density: 45.7 Persons/square mile
2000 Land Area: 439.50 square miles



22 East 6th Street, Mantorville, MN 55955

Contact:
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Dispatch Supervisor
507.635.6219 direct
rick.eggert@co.dodge.mn.us

Alternate Contact:
Jim Jensen
Dodge County Sheriff
507.635.6200
jim.jensen@co.dodge.mn.us

Technical Contact:
Paul Wiltgen
IS (Information Systems)
507.635.6248
paul.wiltgen@co.dodge.mn.us

Agencies Served

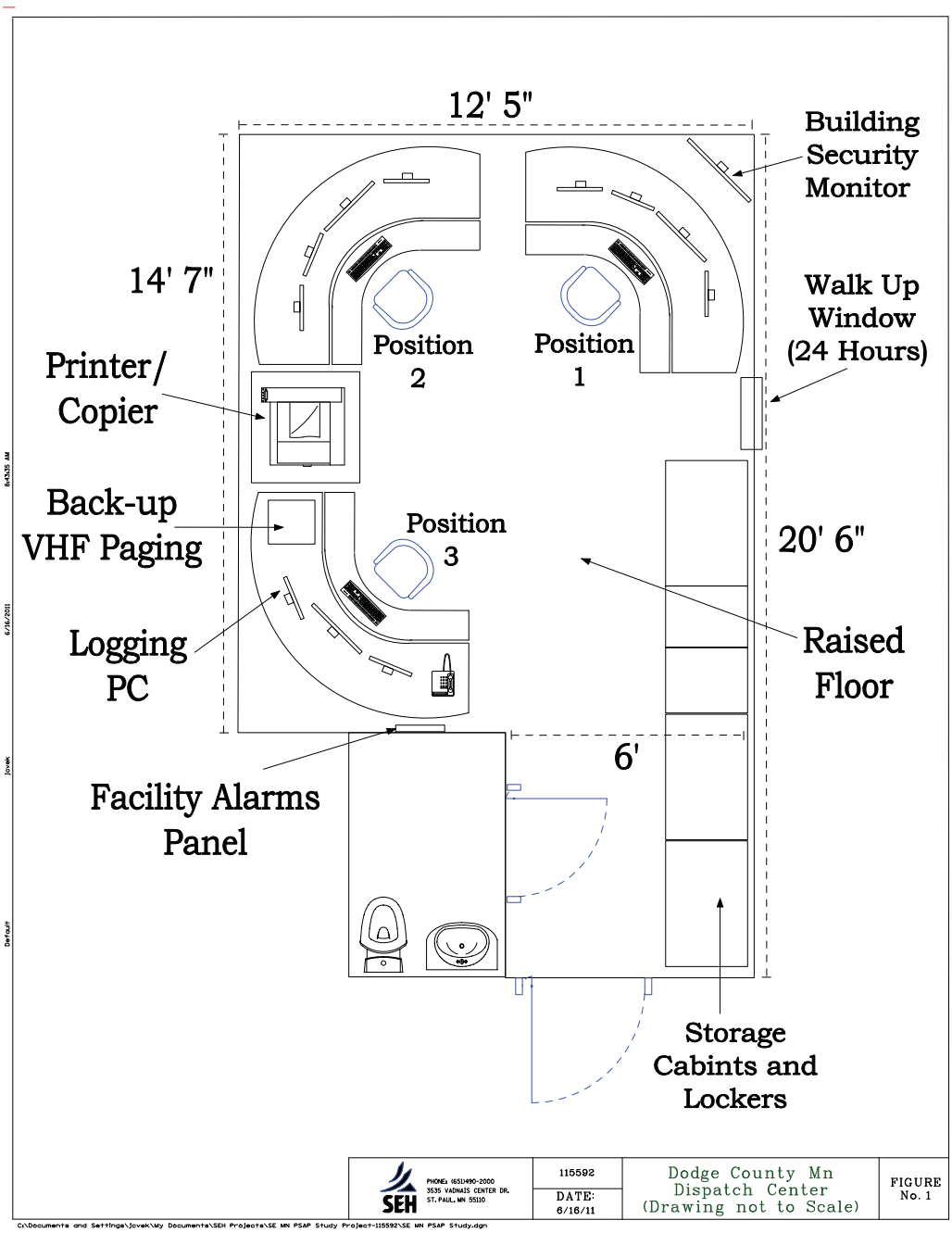
Total Numbers for Dispatch Only		
Total Law Enforcement	7	• **Law** – Dodge County Sheriff, West Concord, Kasson PD, Mantorville, Dodge Center, Clairmont, Hayfield; Do yearly contracts with Law services • **Fire** – West Concord, Kasson, Mantorville, Dodge Center, Clairmont, Hayfield; South-west – Blooming Prairie Fire has service area in Dodge Co., dispatched by Steele Co.; Northeast – Pine Island Fire, dispatched by Goodhue County, paged by phone from Dodge Co. • **EMS First Responders** – Mantorville FD, Dodge Center FD, Clarmont FD, Dodge Center Ambulance, Hayfield Ambulance, West Concord Ambulance; (Blooming Prairie Ambulance is same as FD, same territory; All volunteer; County Hwy is 800 MHz, Each individual town has their own Public Works; Have contact with Hwy Departments • **Other Services** – Public Health, Probations, Emergency Management, Dispatch Center also has window walkups, Sheriff's office admin lines, Kasson PD phone lines roll over to dispatch center after hours; Assist and communicate w/State Patrol, Mayo One, Public Works, and DNR
Total Fire/Rescue	8	
# of Career	0	
# of Volunteer	8	
Total EMS	6	
Other: such as Animal Control, DOT, etc.	4	
Total Agencies Served	25	

Personnel

- Sheriff – Chief Deputy
- Captain, Dispatch Supervisor, 911 Dispatchers
- 8 Full-time Dispatcher – 1 Supervisor
- Part-time – 5 on-call
- Shifts – Combination 12, 10 and 8 hour rotating shifts; 12 hour shifts, 6 a.m. to 6 p.m. and 6 p.m. to 6 a.m. Have on call to cover sick calls, vacations; Will work one shift at least per pay period; no overtime; work 2-12 hour shifts and some 8 hour shifts, work every other weekend, rotating
- Dispatch Supervisor – Work console only as intermittent or overflow, not scheduled
- Call Taking and Dispatch – Single Stage
- Manager – Civilian
- Telecommunicators – Civilian
- Console Positions
  – 911 and Radio – 3

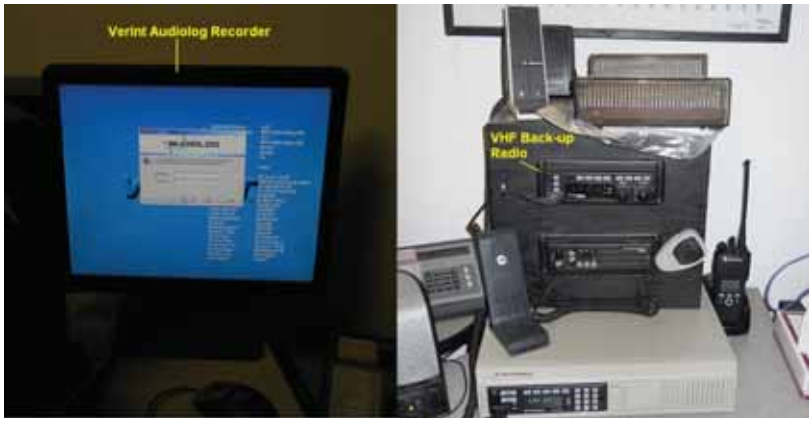
Building Summary

- Dispatch room – 250 sq. ft.
- Equipment room – 108 sq. ft.
  - Climate controlled
- Main dispatch, very cramped
- Lockers
- Small supervisor office – 99 sq. ft.
- Shared lunch room
- Shared meeting room
- Vending machines, pop upstairs and others downstairs
- Shared parking lot with Court House and Public
- County was looking at a school that was vacant but it didn't meet code
- Expansion space – No, County is doing a Space Needs Study, looking at other locations to expand
- Back-up Power – UPS and generator



Equipment/Technology Summary

- Facility Network in addition to PSAP – Yes, County IT Support
- VOIP – Call One/3-Comm
- Telephone – IES, Rescue Star–Plant CML (hub)
- RMS – CIS
- GIS Mapping – Maintained by Geocomm/ GeoLink VS 7.0.4
- Video Recording System – 24-7 recording stored on local server, 12 cameras
- Recording System/Logging Recorder – Verint, all analog
- Master Clock – All done through IT, synch via network
- Flat screens – 17", 19" and 26" (CAD)
- Radio consoles – Motorola Gold Elite
- Paging – Legacy VHF
- CAD – CIS
- Internet Vendor – County IT



CAD	
911 ANI/ALI Interface	YES
State/NCIC Interface	YES
Other Interfaces	GIS Mapping
Alphanumeric Paging	YES, VHF
Automatic Vehicle Location	NO
Emergency Medical Dispatch	NO
Fire Mobile Data	NO , Can Fax map, quick send
Fire Station Alerting	NO
Fire/EMS Records Management	Not Used
Mobile Mapping	NO
Police Mobile Data	YES, Air card, good coverage
Police Field Reporting	YES, From computer in squad car
Police Records Management	YES
Rip & Run	NO
TDD/TTY	–

911 Phone System

- IES, Rescue Star/Plant CML
- 3-911 Trunks all shared, landline only
- 3 Admin lines/POTS lines on 911 equipment
- 3-911 circuits, ringdown to admin
- Internet

Operations

EMD – None

Call Processing

- Direct inbound 911; Very few transfers; Cell calls are routed based on cell sectors and cell companies
- Preprogrammed for neighboring counties
- 95% come into the Dodge County dispatch center; 10% have to be transferred to somewhere else
- Some transfers to others based on cell phone carrier (provider)
- Have automatic one button transfer capability
- Can transfer anywhere in the state; Some VOIP transfer calls but rare

Operational Costs

- No dispatch fees county wide, no charge back to locals for dispatch services
- Just contract fees for deputy per hour

Training

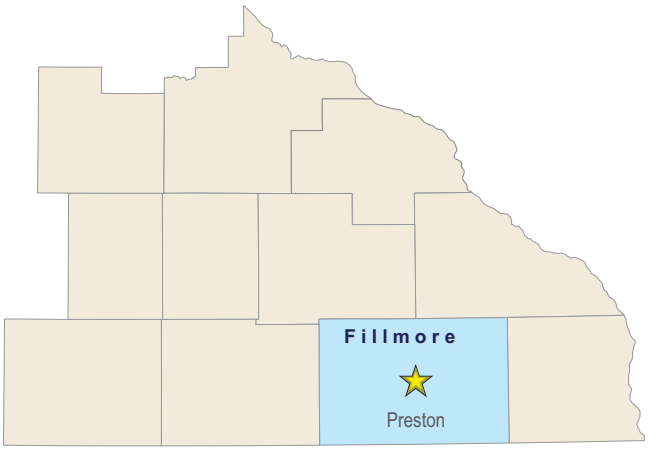
- 13 week program
- Step 1 – 40 hours one-on-one orientation with the chief dispatcher, learning computers, telephone etc.
- Step 2 – Into Dispatch, shadowed by experienced dispatchers/trainers for 3 weeks
- Step 3 – Final certification and then assigned a shift
- Each dispatcher can provide training; Trainers are giving 6 month refreshers

Back-up Procedures and Facilities

- Creating back-up site at Dodge Center Highway Department, back-up EOC and conference room; Installed 2 full dispatch stations and 2 weekday ops positions
- A condensed version of their main dispatch center; Will have phone, radio, CAD, and recording
- Each fire department can dispatch from their site; Legacy radio systems can page
- Connected to main dispatch center via T1 line; Can operate in conjunction with the main dispatcher
- Have a server that mirrors the main server
- Entire building is on generator, dispatch gets full, other departments get minimal
- Microwave link is not backed up by a lease circuit, use control stations which will hit all ARMER towers

PSAP Site Assessment Summary

Fillmore County



Demographics

2010 Population: 20,866
2000-2010 Population Growth: -1.2%
2005-2009 Households: 8,665
2008 Employment: 5,093
2010 Density: 24.2 Persons/square mile
2000 Land Area: 861.25 square miles

901 Houston Street NW
Preston, MN 55965-1080

Contact:
Darrel Jensen
507-765-3874 direct
507-765-2703 fax
djensen@co.fillmore.mn.us

Alternate Contact:
Mike Ask (Emergency Management)
507-635-6200 direct

Technical Contact:
Jeff Cooper (Information Systems)
507-765-2611

Agencies Served

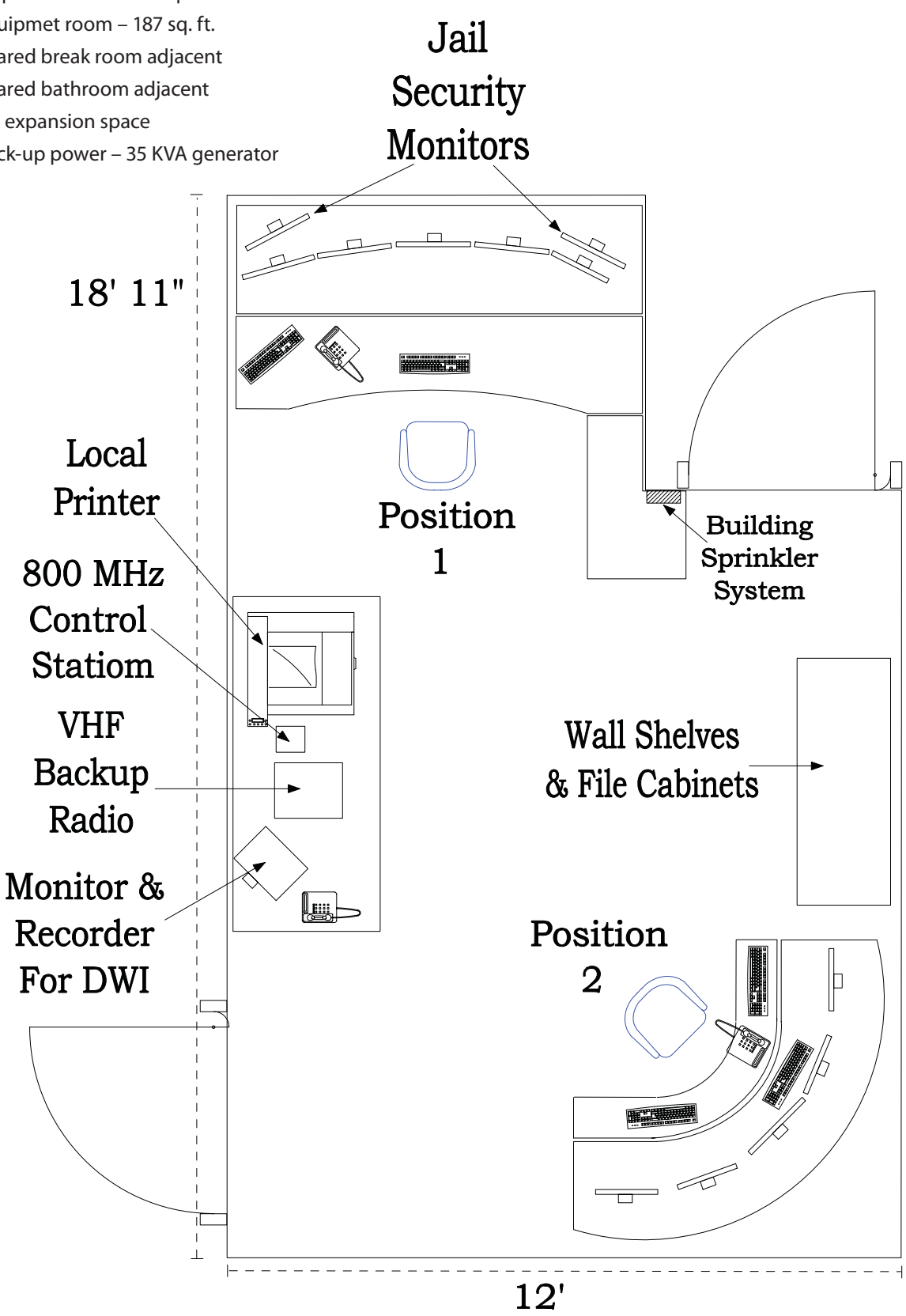
Total Numbers for Dispatch Only		
Total Law Enforcement	6	• **Law** – Sheriffs, Preston PD, Chatfield PD (takes care of Lanesboro), Rushford, Fountain and Ostrander have their own Chief • **Fire** – Canton, Chatfield, Fountain, Harmony, Lanesboro, Mabel, Ostrander, Preston, Rushford, Spring Valley, Wykoff; All Volunteer • **EMS First Responders** – Spring Valley Ambulance, Chatfield Ambulance, Preston Ambulance, Lanesboro Ambulance, Harmony Ambulance, Mabel Ambulance, Rushford Ambulance, Wykoff First Responders, Ostrander First Responders. Out of County: Gold Cross Ambulance, Tri-State Ambulance, Leroy Ambulance, Mayo 1 Helicopter. Gold Cross comes into the County from Olmsted as well as Tri-State; Call Winona dispatch and they would call Tri-State; Canton FD goes into IA; Rushford Ambulance and Fire go into Winona Co. • **Other Services** – Talk to Hwy Shop, Hwy Dept, Jail services, Window contact for customers; Sports contract, Transcriptions/Radio, DVD/tapes of DWI arrests for courts, siren activation (not all communities) for Preston, Canten, Peterson, and Way-len; Enter warrants from the courts, enter all ICR (CJIS), some state patrol dispatching; Page for anyone in the 867 prefix (Chatfield prefix, goes into Olmsted Co.), Harmony goes into Howard Co. in IA (7 phone companies in Fillmore Co.)
Total Fire/Rescue	11	
# of Career	0	
# of Volunteer	11	
Total EMS	2	
Other: such as Animal Control, DOT, etc.	4	
Total Agencies Served	23	

Personnel

- Sheriff
- Jail Admin
- Chief Dispatcher/Jailer/ Emergency Manager
- Supervisor – Does not work with console position regulary
- Call Takers/Dispatchers – Full-time – 4, part-time – 4
- Shifts – 7 nights on 11 – 7, 2 days off, 3 – 11 shift on Friday, 2 days off (weekend), 3-11 Friday, 2 off, 3-11 Mon, Tues, Wed, off on Thurs and Fri. 7-7 at night; 7-7 day, 7-7 every other week end, every other off; Part-time for Thursday shift that is not covered by 4 full-time workers
- Call Taking – Single Position
- Manager – Civilian
- Telecommunicators – Civilian
- Single Stage Dispatching
- Console Positions – 911 and Radio – 2

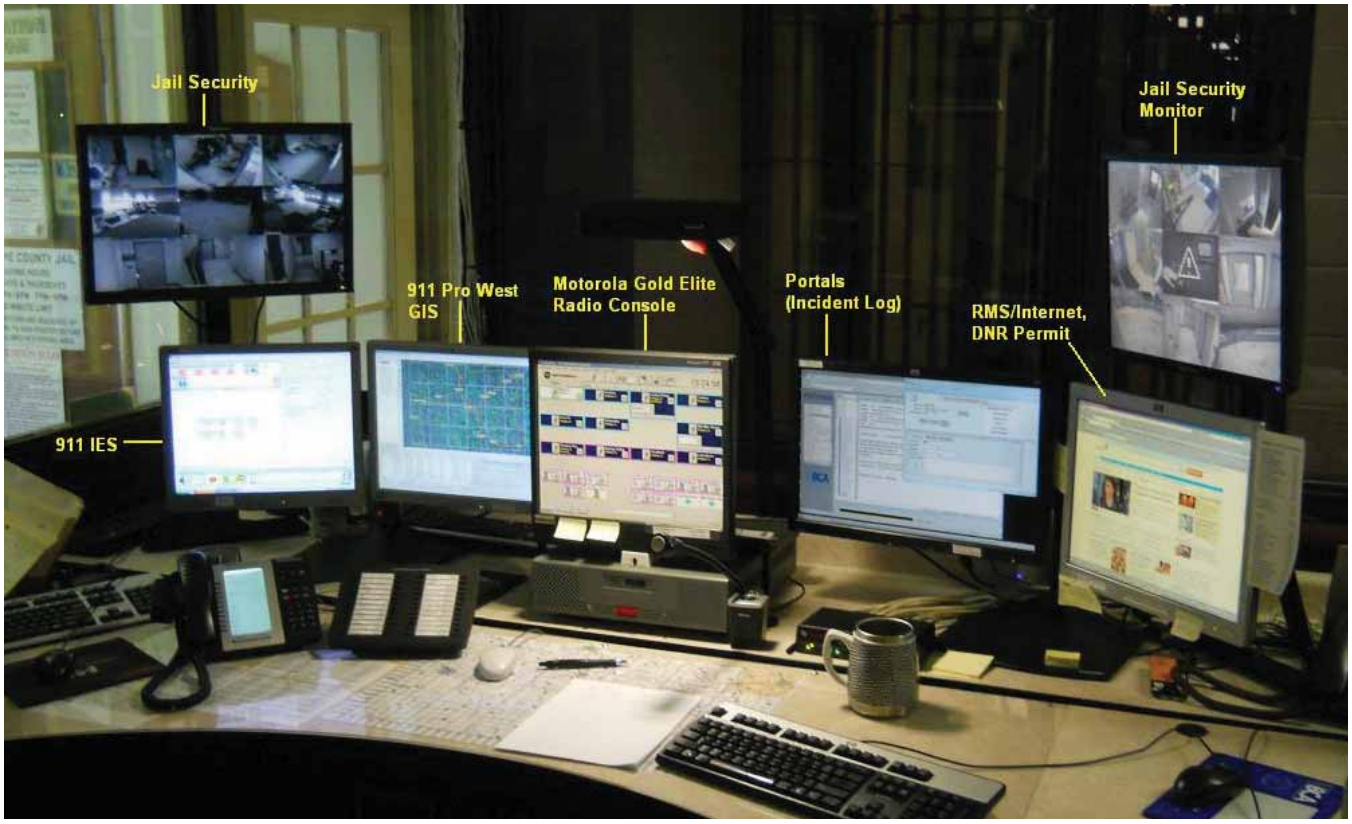
Building Summary

- Dispatch room – 200 sq. ft.
- Equipmet room – 187 sq. ft.
- Shared break room adjacent
- Shared bathroom adjacent
- No expansion space
- Back-up power – 35 KVA generator



Equipment/Technology Summary

- Facility Network in addition to PSAP – Yes, County IT Department
- VOIP – Integra/MyTell
- Telephone – Reliance for Jail Phone System, Long Distance – Qwest
- RMS – SMART-TAC 10, 15 years old
- GIS Mapping – County package, Pro-west
- Video Recording System – Yes, DWI events and Jail; Jailers carry radios
- Recording System/Logging Recorder – Eventide for all calls (phone and radio)
- Master Clock – None
- Radio consoles – Motorola Gold Elite
- CAD – None, using incident log system



CAD Not used

911 Phone System

- IES Rescue Star/Plant CML
- 4-911 Trunks all shared, landline only
- 5 Admin lines/POTS lines on 911 equipment, getting PRI line at summer 2011
- Internet calls – No

Operations

EMD – None

Call Processing

- Call comes in, comes up on screen with name and location (ANI/ALI) of caller
- Computer will Identify the service agency with map and location
- Dispatcher can access router and directions, page the service and then follows up after they are in their vehicle to see if they need any help
- Calls are put in the phone call log
- Officers create the ICR, not the dispatchers; CJIS terminal is retrieving warrants
- Receive wireless calls but most without ANI and ALI
- State Patrol also transfers calls
- Fillmore County does not have much in the way of cell phone coverage due to the large Amish population
- In process of requesting calls rather than to MN State Patrol

Operational Costs

- No bill back for dispatch services (except Law as they get a different level of service), part of basic county service
- Fillmore takes care of technology (radios, repeaters) infrastructure
- Just purchased 800 MHz radios for law as grants were available

Training

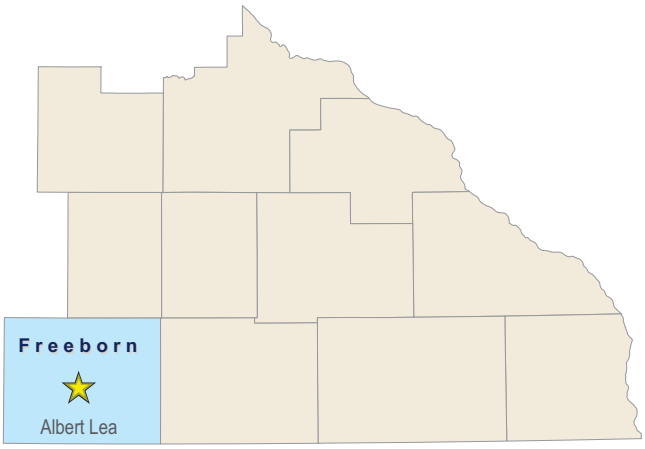
- 13 week program
- On the Job Training – Typical plan meeting State BCA Requirements
- Typical training plan
- Work with experienced dispatchers
- The added Emergency Management Director position complicates Chief dispatcher position, very busy when emergencies occur
- Emergency management activity, responsible for EOC

Back-up Procedures and Facilities

- UPS back-up – Generator 35 KVA
- EOC is active back-up
- Houston County and Fillmore County back each other up

PSAP Site Assessment Summary

Freeborn County



Demographics

2010 Population: 31,255
2000-2010 Population Growth: -4.1%
2005-2009 Households: 13,080
2008 Employment: 12,176
2010 Density: 44.2 Persons/square mile
2000 Land Area: 707.64 square miles

411 South Broadway, Albert Lea, MN 56007

Contact:
Bob Kindler, Sheriff
Dispatch Supervisor
507.377.5218 direct
bob.kindler@co.freeborn.mn.us

Alternate Contact:
Darren Hansen, Lt. #103
507-377-5200
darren.hansen@co.freeborn.mn.us

Technical Contact:
Scott Woitas, IS Director
507-377-5102
scott.woitas@co.freeborn.mn.us

Operations Contact
Mary Seltun, System
507-377-5200
mary.seltun@co.freeborn.mn.us

Agencies Served

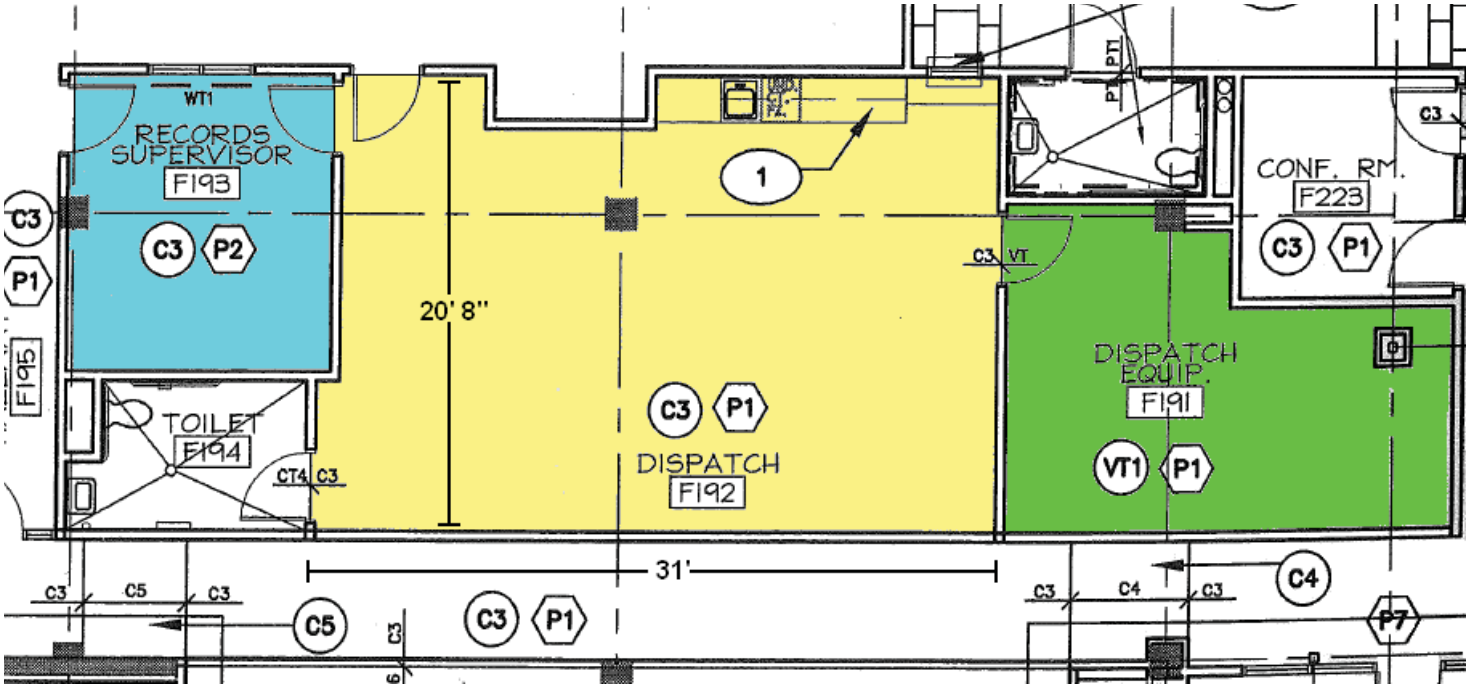
Total Numbers for Dispatch Only		
Total Law Enforcement	5	• **Law** – Sheriff's office, Alden PD, Albert Lea PD, Freeborn Co. Jail Transport, DNR/ State Patrol; Other tasks: Walk up window at dispatch and video visitation • **Fire** – City of Albert Lea, Part-time: Albert Lea township, Alden, Clarks Grove, Conger, Emmons, Freeborn, Geneva, Hartland, Hayward, Hollandale, London, Manchester, Myrtle, & Twin Lakes • **EMS First Responders** – Mayo Clinic Health Systems – Albert Lea, Freeborn, New Richland, Gold Cross Ambulance, Blooming Prairie, Lake Mills (Iowa) • **Other Services** – Public Health, Environment Services, County Hwy, City Public Works, Emergency Management
Total Fire/Rescue	15	
# of Career	1	
# of Volunteer	14	
Total EMS	6	
Other: such as Animal Control, DOT, etc.	3	
Total Agencies Served	29	

Personnel

- City Chief, Dispatch Supervisor, Lead Dispatcher, Dispatchers
- 10 total, 8 full-time, 2 part-time
- Fire Association meets monthly, dispatch regularly attends
- 3 – 911 lines, 3 – admin and 5 – radio, all logged
- Shifts – 10 hour shifts, some set shifts, some bounce, shifts bid by seniority repeats every 18 weeks
- Turnover is very low, only 1 in several years, hired dispatcher in 2009
- Dispatch Supervisor – Do not work console, not part of minimum staffing levels
- Call Taking and Dispatch – Two Stage
- Manager – Civilian
- Telecommunicators – Civilian
- Console Positions
  - 911 and Radio – 3 plus 1 lead
  - Will expand to 4 or 5 with new MCC 7500 consoles, 3 dispatch, 1 EOC & 1 records

Building Summary

- Dispatch room – 650 sq. ft.
- Equipment room – 265 sq. ft.
  - Next to the PSAP
  - Additional equipment space just below dispatch
  - Climate controlled
  - Minimal space to install new equipment; A conference room next to the equipment room could be used if needed
  - UPS
  - Some equipment is grounded
- EOC functions as a conference room as does the squad room, detective conference room
- Lockers
- Break room
- Vending
- County owned parking lot adjacent, not reserved; There is also a city lot



Equipment/Technology Summary

- Facility Network in addition to PSAP – Yes
- VOIP – No dispatch can view building cameras
- Telephone – IES, Rescue Star–Plant CML (hub)
- RMS – CIS
- Mobile Data – Motorola, MW 800, originally installed 2005; Mobile CIS software, Geocomm map
- GIS Mapping – Maintained by Geocomm/GeoLink VS 7.0.4
- Video Recording System – Yes
- Master Clock – Yes, Consoles/CAD/911 are all synched
- Back-up phones – No, if phone system goes down, dispatch and all go down; Have condition for routing to Mower County; Have to use a cell phone to call phone co. (Qwest) to have calls rerouted
- Flat screens – 19"; No touch screens
- Radio consoles – Zetron; New MCC 7500 Consoles to be installed and NICE logging
- Paging – Narrowbanding planned
- Radio Transmission Problems – County added two ARMER sites, Albert Lea for building capacity and at Glenville for additional coverage; Added one extra channel at each of the ARMER tower sites
- CAD – CIS, Geocomm maps integrated into CIS; will be going to a .net version, deployment in 18 months; Updated regularly
- Internet – Through-put is about 50 Mbps, may potentially get up to 100 Mbps; Fiber path from Charter has just a single route into the building (no diversity)

CAD	
911 ANI/ALI Interface	YES
State/NCIC Interface	YES
Other Interfaces	YES
Alphanumeric Paging	–
Automatic Vehicle Location	Albert Lea Only
Emergency Medical Dispatch	NO
Fire Mobile Data	NO
Fire Station Paging	YES
Fire/EMS Records Management	NO, Just call for service
Mobile Mapping	YES
Police Mobile Data	YES
Police Field Reporting	YES, Can do but not well used, stability issues, old system
Police Records Management	YES
Radio Console/System – Push-to-Talk/Emergency	YES
Rip & Run	NO
TDD/TTY	YES

911 Phone System

- IES, Rescue Star/Plant CML
- 3 – 911 lines
- 3 – Admin lines
- 5 – Radio, MNSEF, P-P, Local PD, Albert Lea - Mayo Clinic Health System, Fire
- Total calls for service/ALI retrieval
- 911 call volume
- Internet

Operations

No EMD – ECC provides the pre-arrival medical instructions

Call Processing

- 911 calls are all inbound to the county and transferred to State Patrol
- Calls transferred to dispatch from State Patrol come in on admin lines
- Incoming 911 calls show up on Admin lines

Operational Costs

- City PD pays labor
- County pays the same fixed % and capital improvements
- For dispatch services, City pays 2/3rds of records and staff costs. County pays 1/3 of dispatch staff costs

Training

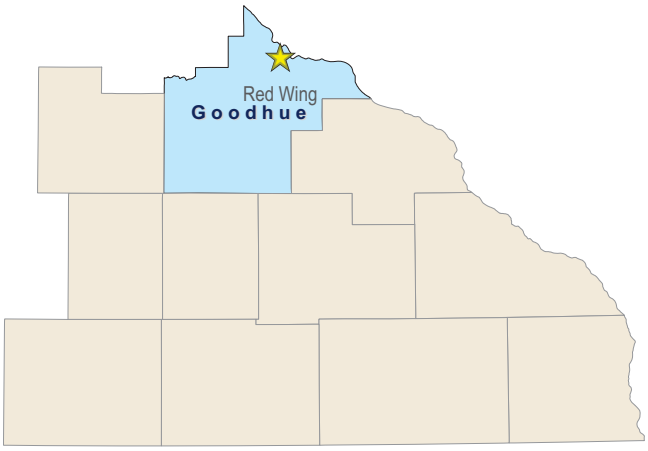
- New trainees follow lead dispatcher at least one month
- Trainees then start to dispatch while being shadowed by experienced dispatchers
- About 3 months of training. Certification/Proficiency documents
- About 3 of 5 have not made it through the certification

Back-up Procedures and Facilities

- Currently back up is at the EOC and hospital
- Planning for backup at the Hwy department, two full consoles with CAD, after migration to ARMER
- Current dispatch facility has full dedicated UPS, servers are on backup generator with County IT infrastructure (entire facility on backup generators

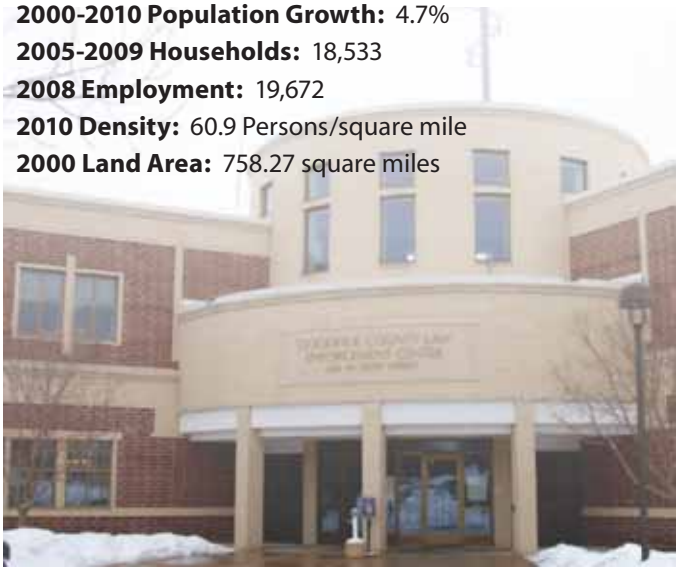
PSAP Site Assessment Summary

Goodhue County



Demographics

2010 Population: 46,183
2000-2010 Population Growth: 4.7%
2005-2009 Households: 18,533
2008 Employment: 19,672
2010 Density: 60.9 Persons/square mile
2000 Land Area: 758.27 square miles



430 W. 6th Street, Red Wing, MN 55066

Contact:
Wayne Betcher
651.267.2644
wayne.betcher@co.goodhue.mn.us

Alternate Contact:
Lyle Lorensen, Chief Deputy

Technical Contact:
Tris Matthews
651-385-3124

Agencies Served

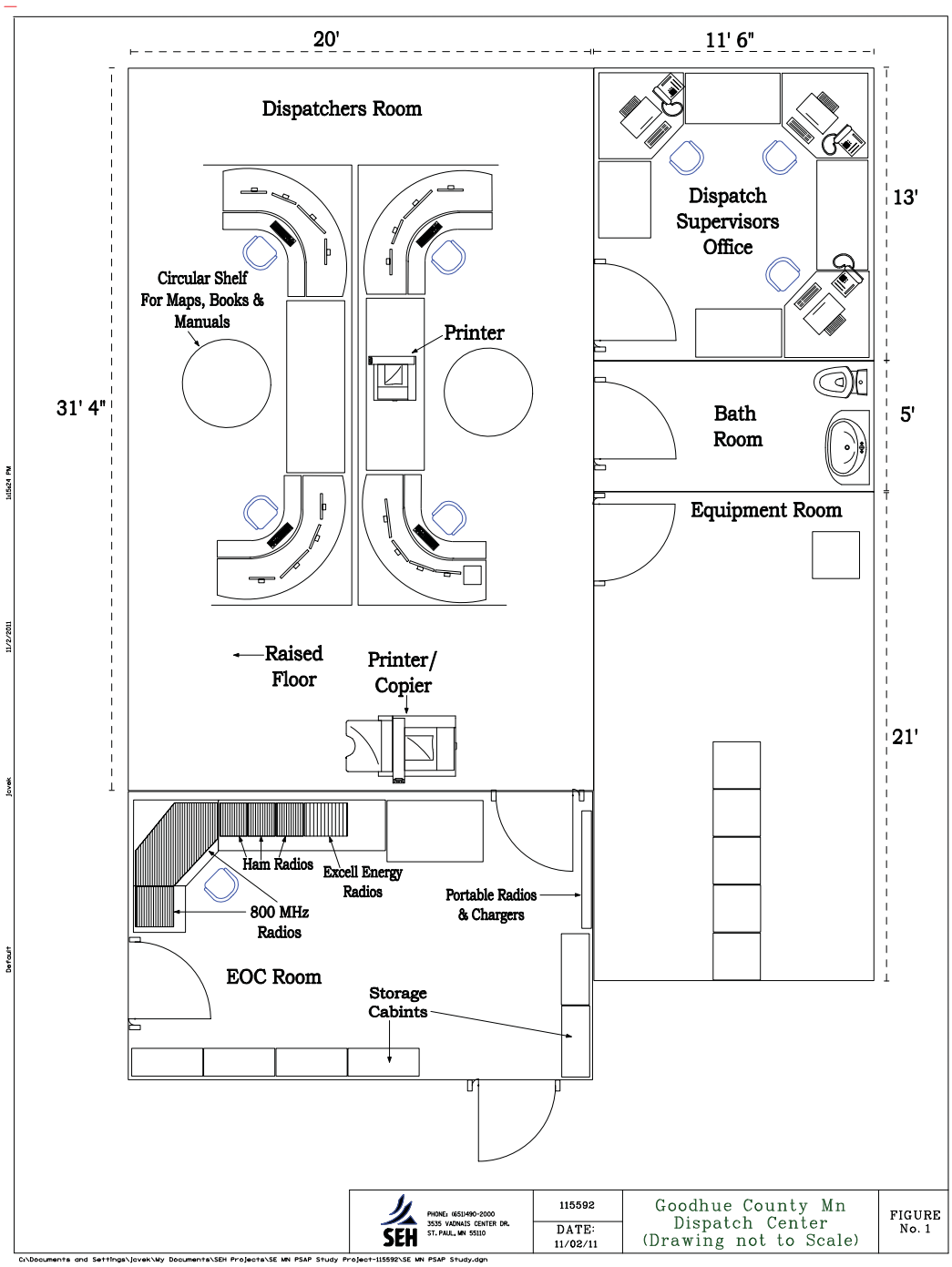
Total Numbers for Dispatch Only		
Total Law Enforcement	7	• **Law/Sheriff** – Red Wing PD, Cannon Falls PD, Zumbrota PD, Goodhue PD, Kenyon PD, Prairie Island Tribal PD • **Ambulance** – Red Wing (4 units), Zumbrota (3 units), Cannon Falls (3 units); Red Wing is paid, all others are volunteer; Kenyon dispatch by Goodhue, recent change; Northfield dispatched in the Metro, Lake City dispatched by Wabasha Co, responds into Goodhue and Lake City, Frontenac; Most EMS is separate from fire except the City of Red Wing • **Fire** – Fire – Red Wing, Zumbrota, Pine Island, Goodhue, Cannon Falls • **Other Services** – Meisville (paged by Dakota Co.) Randolf Fire (Dakota Co.), North Field Fire (Dispatched by Rice Co.), Mazzepa Fire (Wabasha Co.), West Concord; Red Wing is the only career FD, the rest are volunteer *There are 73 combinations of responders depending on overlay, CAD and service addressing aids this.*
Total Fire/Rescue	7	
# of Career	1	
# of Volunteer	6	
Total EMS	10	
Other: such as Animal Control, DOT, etc.	4	
Total Agencies Served	28	

Personnel

- CAD/RMS Joint Powers Agreement with City
- Full-time – 12
- Part-time – 0
- Shifts – 11.5 hours/shift
- Manager – Civilian
- Telecommunicators – Civilian
- Supervisors – 2 center supervisors with overlapping shifts
- Supervisors – Work console position ad hoc are part of minimum staffing levels
- One-stage Call Take and Dispatch
- Console Positions
  - 911 and Radio – 4 in Dispatch
  - 911 Only – 1 Phone bank in adjacent room
  - Radio Only – 0

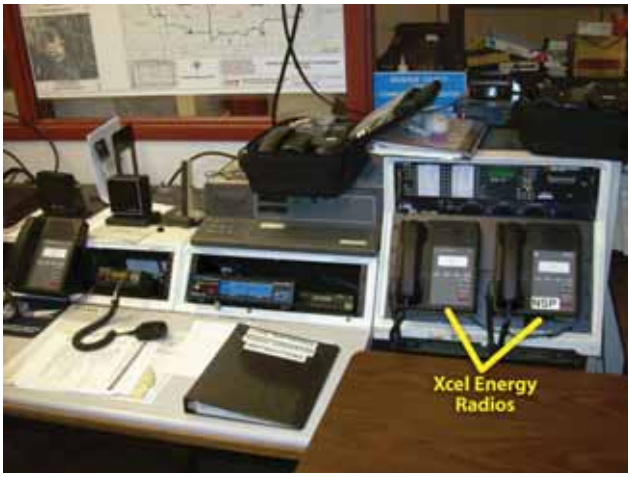
Building Summary

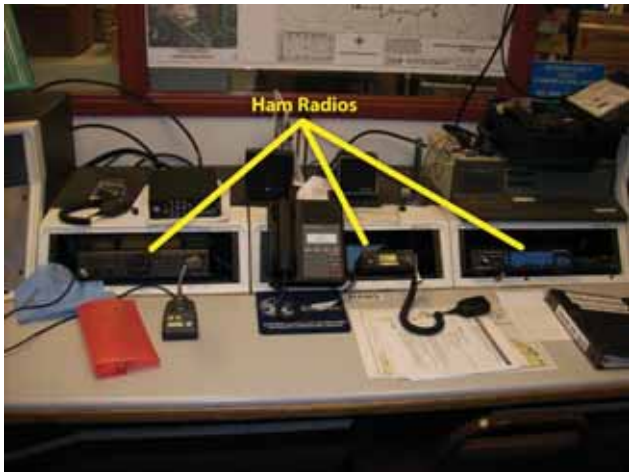
- Dispatch room – 620 sq. ft.
- Equipment room – 241 sq. ft.
- Dispatch Supervisor Office – 149 sq. ft.
- Built in 1999/2000
- Adjacent space could be used to accommodate large center
- Adjacent EOC – Power plant, nuclear drills, ham radio, 800 radio, smart boards
- Dispatch is protected and self-sufficient
- Video conference available
- Employee lockers and adjacent restrooms
- Shared vending
- Parking lot shared with Jail, no shortages
- Back-up Power – UPS and biodiesel generator



Equipment/Technology Summary

- Facility Network in addition to PSAP – Yes
- VOIP – Exploring VIPER/VOIP for Sheriff
- Telephone – 2PBX
- Video and Recording Systems – Cameras and alarms
- Radio Consoles – MCC 7500 Motorola
- Paging and Alerting – VHF
- Mobile Data – CIS, v 4.0, 2.0
- GIS Mapping – CIS, County GIS: Integrated
- Master Clock – VPN Netclock: ARMER
- Logging Reorder: NICE and Higher Ground
- RMS – CIS

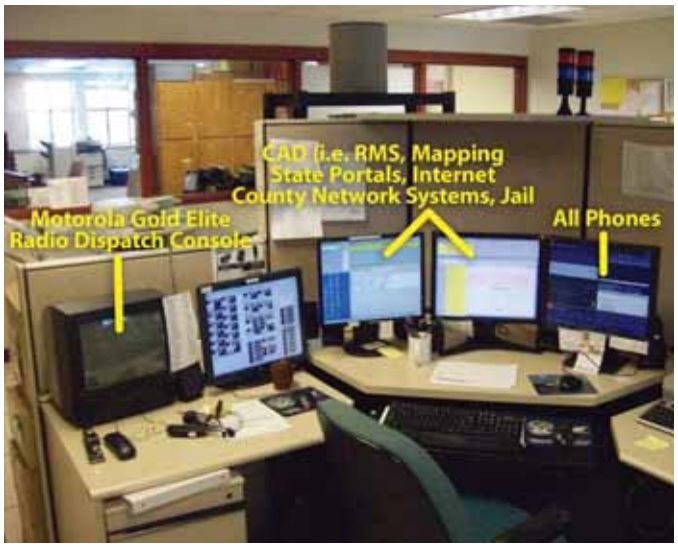




CAD	
911 ANI/ALI Interface	YES
State/NCIC Interface	YES
Other Interfaces: (MDC)	YES
Alphanumeric Paging	NO, Not via CAD
Automatic Vehicle Location	YES
Emergency Medical Dispatch	NO
Fire Mobile Data	NO
Fire Station Alerting	NO
Fire/EMS Records Management	YES, Track basic ICR
Mobile Mapping	YES
Police Mobile Data	YES
Police Field Reporting	YES, Use CIS via Citrix
Police Records Management	YES
Radio Console/System – Push-to-Talk/Emergency	YES
Rip & Run	NO, Have capability, not used
TDD/TTY	YES, Not in CAD, it's on the phone

911 Phone System

- Positron – Power 911 migrating to VIPER
- Busiest Times: 2:00 p.m., 5:00 p.m. - 11:00 p.m.
- 5-911 trunks, 1,200 calls/month
- 6 Administrative trunks; Answering point for police, fire, jail
- Two back-up trunks if PBX is down
- Make Busy Circuits – rolls to admin if 5-911 are busy
- 1, 2, 3 on St. Paul tandem
- 4, 5 on Rochester tandem



Operations

EMD – Not done by PSAP, provided by Allina and North

- Dispatchers certified in CPR/basic first aid
- Dispatchers ask questions before giving to EMD
- 5 – 7 minute response time for responders

Call Processing

- Transfers come from Wisconsin and State Patrol; More sent to Patrol than received from them
- Pierce County Wisconsin, State Patrol, Dakota, Dodge also receive Goodhue calls
- Primary receiving point, few transfers
- Primarily live transfer to get caller ID info
- Always verify call back and address

Operational Costs

- Dispatch for all agencies in County paid by County
- Agencies are charged per ICR
- Hardware – local expense
- County IT maintains central servers

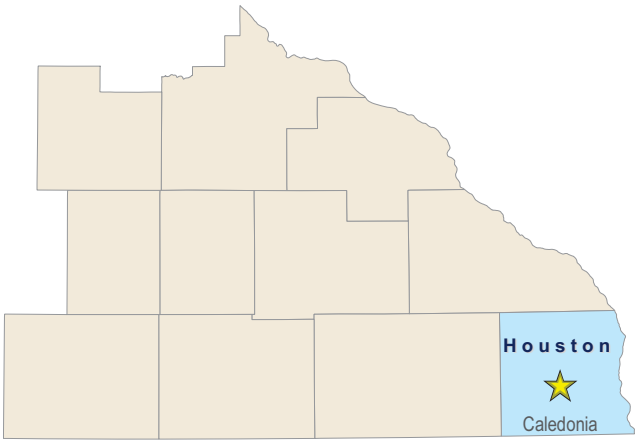
Training

- CPR – 2 years
- First Aid – 2 years
- CIDN Certification – every 2 years
- On the job training for new hire – 16 weeks
- Review manual; Site with dispatcher; Build exercises; Rated on call with dispatch

Back-up Procedures and Facilities – no back-up location, Can transfer to Cannon Falls PD, portable radios

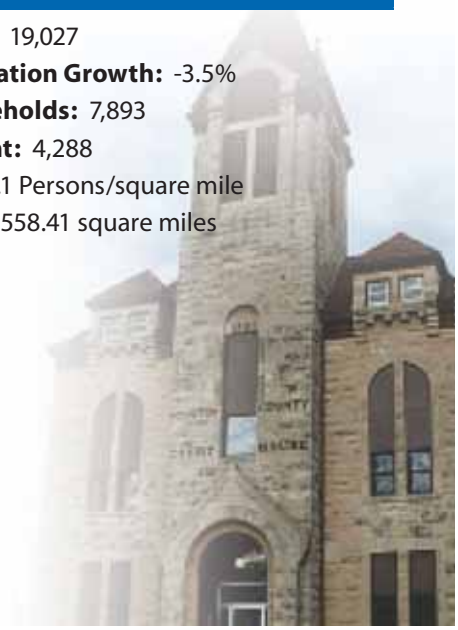
PSAP Site Assessment Summary

Houston County



Demographics

2010 Population: 19,027
2000-2010 Population Growth: -3.5%
2005-2009 Households: 7,893
2008 Employment: 4,288
2010 Density: 34.1 Persons/square mile
2000 Land Area: 558.41 square miles



306 South Marshall Street
Caledonia, MN 55921

Contact:
Scott J. Yeiter
507-725-3379, ext. 7
scott.yeiter@co.houston.mn.us

Technical Contact:
Andy Milde
608-713-9301

Alternate Contact:
Mark Schiltz
507-635-6200 direct

Agencies Served

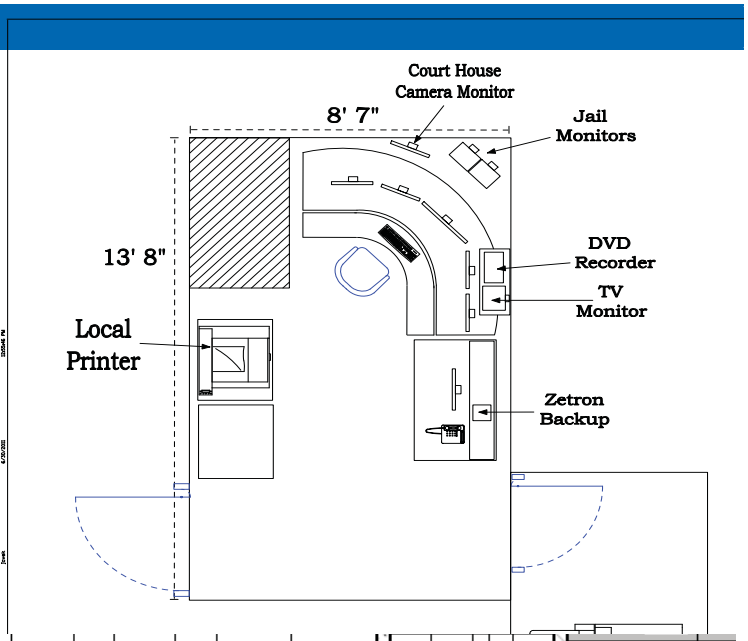
Total Numbers for Dispatch Only		
Total Law Enforcement	6	• **Law** – Sheriff, La Crescent PD, Hokkah , Houston PD, Caledonia PD, Spring Grove PD • **Fire** – La Crescent FD, Hokkah , Houston, Caledionia, Spring Grove PD, Eitzen, Brownsville (All Volunteer) • **EMS First Responders** – Houston, Calidonia and Spring Grove; New Albin Fire and Ambulance, do not page or call direct, they call Alamkee County who dispatches (All Volunteer) • **Other Services** – Jail, Genona Nuclear plant (decommissioned), code red; Siren activations; Dispatcher is the back-up jailer for the entire jail; 24 x 7 DOC requirement; One court security who is a deputy; Courts logistics; Reverse 911; New jail, dispatcher will control elevator, control sally ports, doors, etc.
Total Fire/Rescue	7	
# of Career	0	
# of Volunteer	7	
Total EMS	3	
Other: such as Animal Control, DOT, etc.	2	
Total Agencies Served	18	

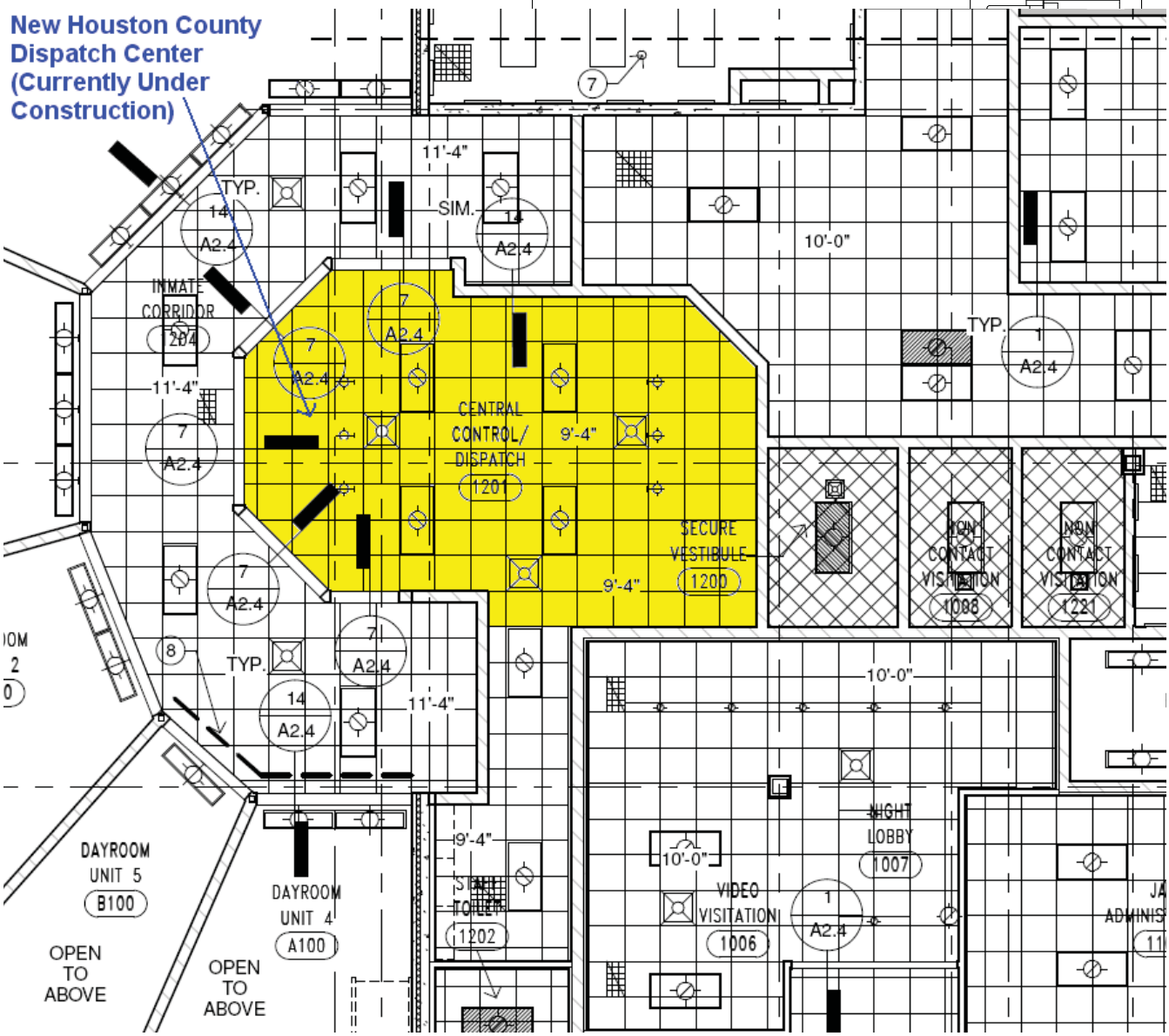
Personnel

- Sheriff
- Chief Deputy
- Jail Admin
- Lead Jailers/Lead Dispatchers – 2
  - Have shift and do schedules
  - Jail admin can be a backup dispatcher
- Jailer/Dispatchers – 7
- Plus admin – 10
- Full-time – 6
- Temporary rotating positions
- Shifts – 1 per shift off hours; 1 extra during the day; Work set 12 hour shifts, 7:00 a.m. to 7:00 p.m.
- Call Taking – Single position
- Manager – No
- Telecommunicators – No
- Console Positions
  - 911 and Radio – 2

Building Summary

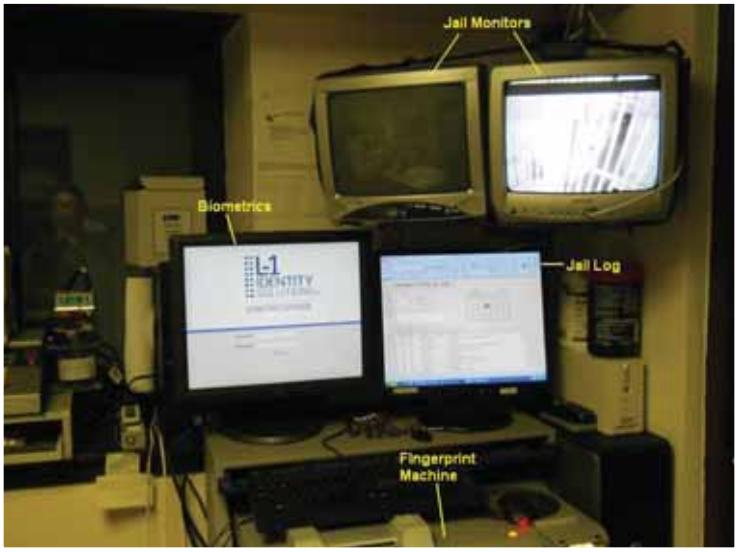
- Dispatch/Master Control room– 126 sq. ft.
- Equipment room
  - Climate controlled
- Break room next door to dispatch
- Vending
- Conference room upstairs and down stairs
- EOC downstairs with lockers and showers
- Employee parking at jail in new facility





Equipment/Technology Summary

- Facility Network in addition to PSAP – No, County IT Support
- VOIP – Future plan
- Telephone – Panasonic for now; Migrating to new phone system
- RMS – Police Central
- GIS Mapping – Only 3 vehicles, not County wide
- Video Recording System – Yes for jail and court cameras; All new in jail; Will be changing with new facility
- Recording System/Logging Recorder – TEAC analog, looking at NICE Logging
- Master Clock – None
- Radio consoles – Migrating to MCC 7500, 2 positions



CAD Not used

911 Phone Systems

- Panasonic phone system
- 3-911 Trunks all shared, landline only
- 3 Admin lines/POTS lines on 911 equipment
- 3-911 circuits, ringdown to admin
- 911 call volume
- Internet

Operations

EMD – None

Call Processing

- Take 911, location shown on map, flashes application of the caller
- Map will tell you what entity to call based on type of emergency
- Pictometry gives picture of location
- Dispatcher issues call to the appropriate service type
- For law they will generate an ICR unless it is out of jurisdiction, they do this for Hokah and Houston
- PD's typically do their own ICR i.e. Caledonia, La Crescent etc., they do not want to share the cost
- They do their own radio log, ICR is Houston County's record management system
- Spring Grove will do their own record management system
- 49,000 calls annually in the log
- Same process for 911 calls; They get their own wireless calls, does not go to State Patrol first
- Some calls transferred from Wisconsin
- A few calls get transferred, not many

Operational Costs

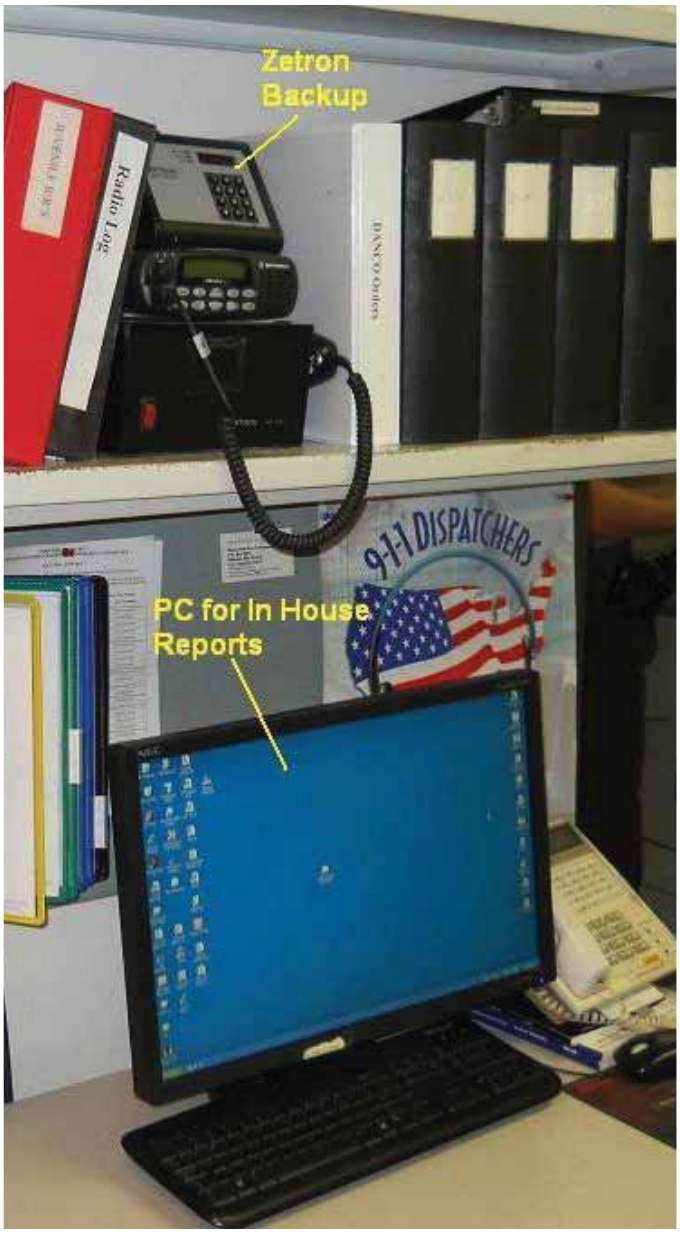
- County funds dispatch operations; No bill back to cities
- No rates charged for dispatch services

Training

- On the job for dispatch
- 6 week program, reading manuals etc
- Start working with existing dispatchers

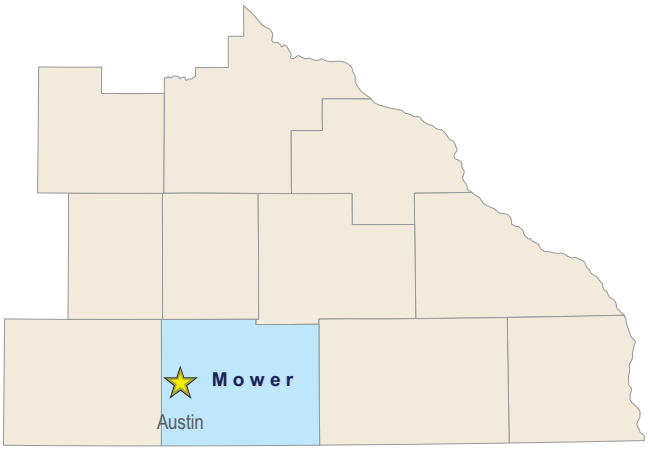
Back-up Procedures and Facilities

- 911 call transfers go to Fillmore County
- Dispatching goes to La Crescent (back-up dispatch ops, have radios but only one phone)



PSAP Site Assessment Summary

Mower County



Demographics

2010 Population: 39,163
2000-2010 Population Growth: 1.5%
2005-2009 Households: 15,994
2008 Employment: 13,995
2010 Density: 55 Persons/square mile
2000 Land Area: 711.50 square miles

201 1st Street NE, Austin MN 55912

Contact:
Marlys Sorlle
507-437-4548 direct
masorl@co.mower.mn.us

Alternate Contact:
Terese Amazi
507-437-9410 direct
teamaz@co.mower.mn.us

Technical Contact:
Andy Leason Homer

Operations Contact
Bill Banton, County IT
507-437-9487

Agencies Served

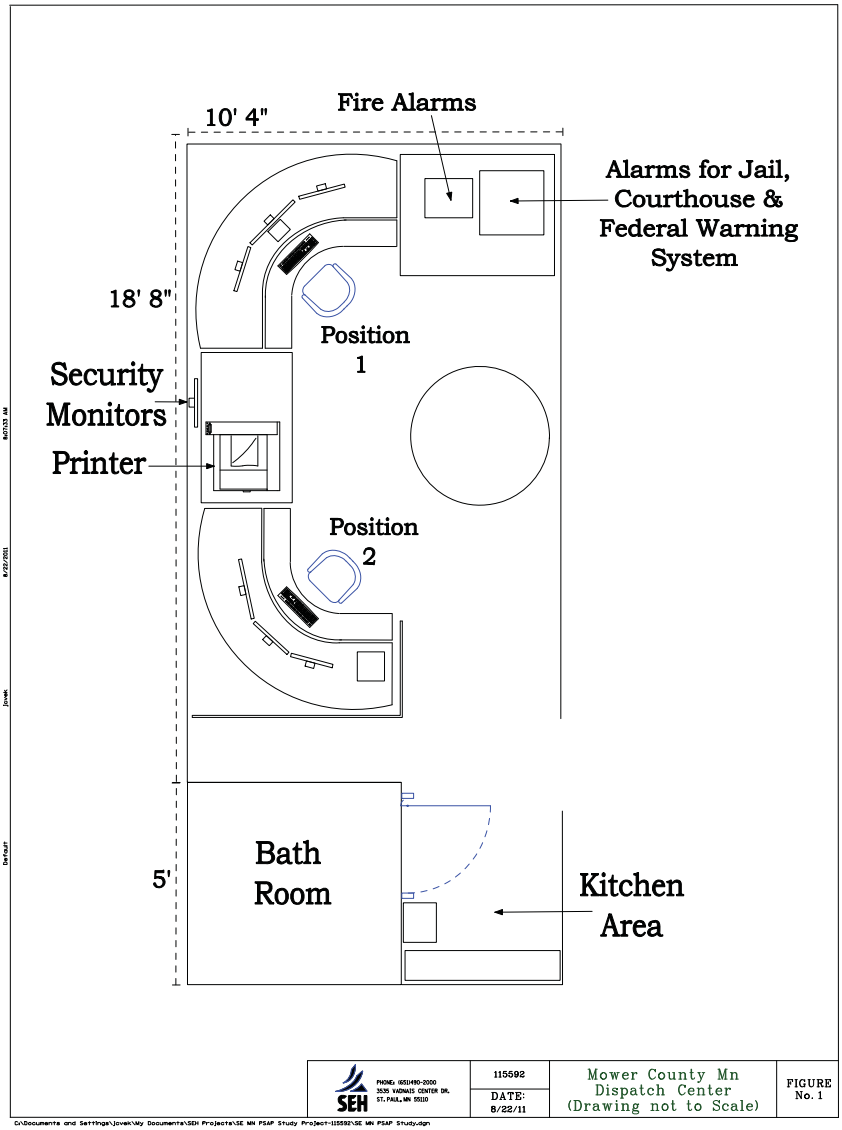
Total Numbers for Dispatch Only		
Total Law Enforcement	6	• **Law** – Sheriff, Austin PD, City of Adams, Brownsdale, Lyle/Mapleview, Grand Meadow, Contract services for Leroy • **Fire** – Mapleview, Brownsdale, Grand Meadow, Leroy, Adams, Lyle, Austin, Dexter • **EMS First Responders** – Adams, Leroy, Grand Meadow, Austin (Gold Cross) • **Other Services** – County Attorney, City Attorney, Human Services, Back ground checks for city of Austin and Housing and redevelopment for city of Austin, Posse, Police Reserves (shared), DNR, State Patrol, Community Service Officers (3) and includes animal calls. Military background checks, transactions, Background checks for volunteers, finger prints, jobs for schooling and adoptions, Admin support; No Highway, Public works or Parks
Total Fire/Rescue	8	
# of Career	1	
# of Volunteer	7	
Total EMS	4	
Other: such as Animal Control, DOT, etc.	4	
Total Agencies Served	22	

Personnel

- Communications Supervisor reports to sheriff
- 13 are staffed in the dispatch center
- 3 of the 13 are specialty with cross training for evidence tech, warrants/payroll/walkups/ transcribe tapes for detectives/reports/background checks/juvenile arrests (calls parents)
- 10 Dispatchers total, 9 full-time, 1 part-time (3/4 time), 3 non-dispatchers with specialty training
- 5 – 911 lines, 5 – admin
- Shifts – 40 hours per week, 10 hour shifts, 4 days on, 3 days off, Some fill in relief positions
- Turnover is very low, two retirements in past three years• Dispatch Supervisor – Do not work console regularly, some backup
- Call Taking and Dispatch – Multitask
- Manager – Civilian
- Telecommunicators – Civilian
- Console Positions
  - 911 and Radio – 2 in dispatch; 1 just outside is backup with 911 CAD but no radios
  - Separate EOC downstairs, radio only, no 911 phones, regular phone only

Building Summary

- Dispatch room – 194 sq. ft.
- Equipment room
  - Equipment room located downstairs
  - Climate controlled
  - UPS backup
  - 2 position dispatch adjacent to sheriff's office
- Training room and EOC downstairs
- Larger break room down stairs
- Lunch room adjacent to dispatch center
- Small microwave/fridge/coffee maker and bathroom adjacent to dispatch
- Shared spaces for conference rooms
- Vending – Pop machine downstairs; Candy machine in court house, locked after hours but have a key
- Security – After hours, outer door locks. No access after hours unless authorized by dispatcher and officer call in
- No dedicated parking, Park out in public parking lot, no problems



Equipment/Technology Summary

- Facility Network in addition to PSAP – Yes, all on County IT infrastructure; Some separate systems
- Telephone – IES Rescue Star
- RMS – Positron
- Mobile Data – Motorola through Whitewater Wireless
- GIS Mapping – Positron/Intrado, Support is via Mower County GIS
- Master Clock – Yes
- Flat screens – Yes
- Radio consoles – Orbicom; Have several 800 MHz radios and dual band radios; Have interoperability plan with ARMER
- Paging – Fire and ambulance paging, civil defense sirens
- Radio Transmission Problems –
- CAD – Positron (now Intrado), originally installed 2002, 8 – 9 years, have current updates, Laptops in vehicles
- Internet – County IT (on County IT Network)
- Recording System – Verient Logger

CAD	
911 ANI/ALI Interface	YES
State/NCIC Interface	YES
Other Interfaces	Portals record access
Alphanumeric Paging	YES , Radio console
Automatic Vehicle Location	YES
Emergency Medical Dispatch	NO
Fire Mobile Data	NO , 1 unit in Brownsdale
Fire Station Alerting	NO
Fire/EMS Records Management	YES
Mobile Mapping	YES
Police Mobile Data	YES
Police Field Reporting	YES
Police Records Management	YES
Radio Console/System – Push-to-Talk/Emergency	YES
Rip & Run	NO
TDD/TTY	YES

911 Phone System

- IES Rescue Star
- 5 – 911 lines
- 5 – Admin lines
- 5 – Ringdowns
- Total calls for service/ALI retrieval
- 911 call volume
- Internet
- Budget – Staffing
  - Full-time $310,333
  - Part-time $137,675
  - 911 Phone $93,000

Operations

No EMD – None, all are transferred to Gold Cross

Call Processing

- 911 call that get transferred in show up on Admin lines
- Do call transfers to Iowa and State Patrol

Other Work

- Additional work is 40% traditional none dispatch
- Parking enforcement (writing tickets, enter citations into records mgmt system)
- Some officers still write reports; Also do warrants, license checks, bail studies

Operational Costs

- City PD pays labor
- County pays the same fixed % and capital improvements
- For dispatch services, City pays 2/3rds of records and staff costs. County pays 1/3 of dispatch staff costs
- Dispatchers paid $15-$20/hour

Training

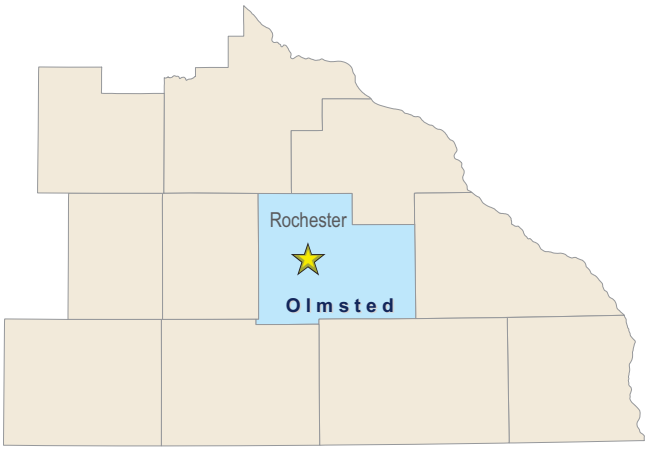
- OJT – Shadowed by experienced workers, 3 weeks on each shift which = 12 weeks, (part-time is four weeks on each shift)
- Check off sheets and evaluations on status
- FTO program/weekly evaluation, final certification

Back-up Procedures and Facilities

- Transfer calls to Freeborn County as backup (had to do once during a major phone outage)
- Have generator and UPS backup of dispatch

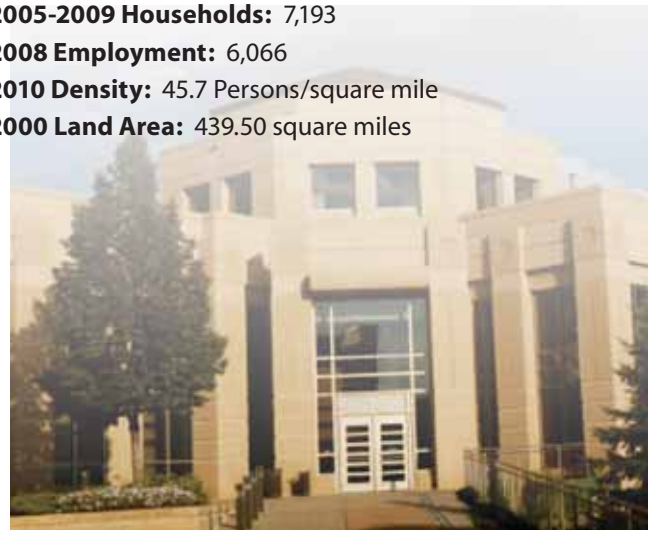
PSAP Site Assessment Summary

Olmsted County



Demographics

2010 Population: 144,248
2000-2010 Population Growth: 16.10%
2005-2009 Households: 7,193
2008 Employment: 6,066
2010 Density: 45.7 Persons/square mile
2000 Land Area: 439.50 square miles



101 4th Street Southeast, Rochester, MN 55904-3718

Contact:
Gary Mulleneaux,
Comm. Manager
507.328.6908 direct

Alternate Contact:
Capt. Rick Krueger
Rochester PD
507.328.6911
rkrueger@rochestermn.gov

Technical Contact:
Mike Sloan, County IT
507.328.7781

Agencies Served

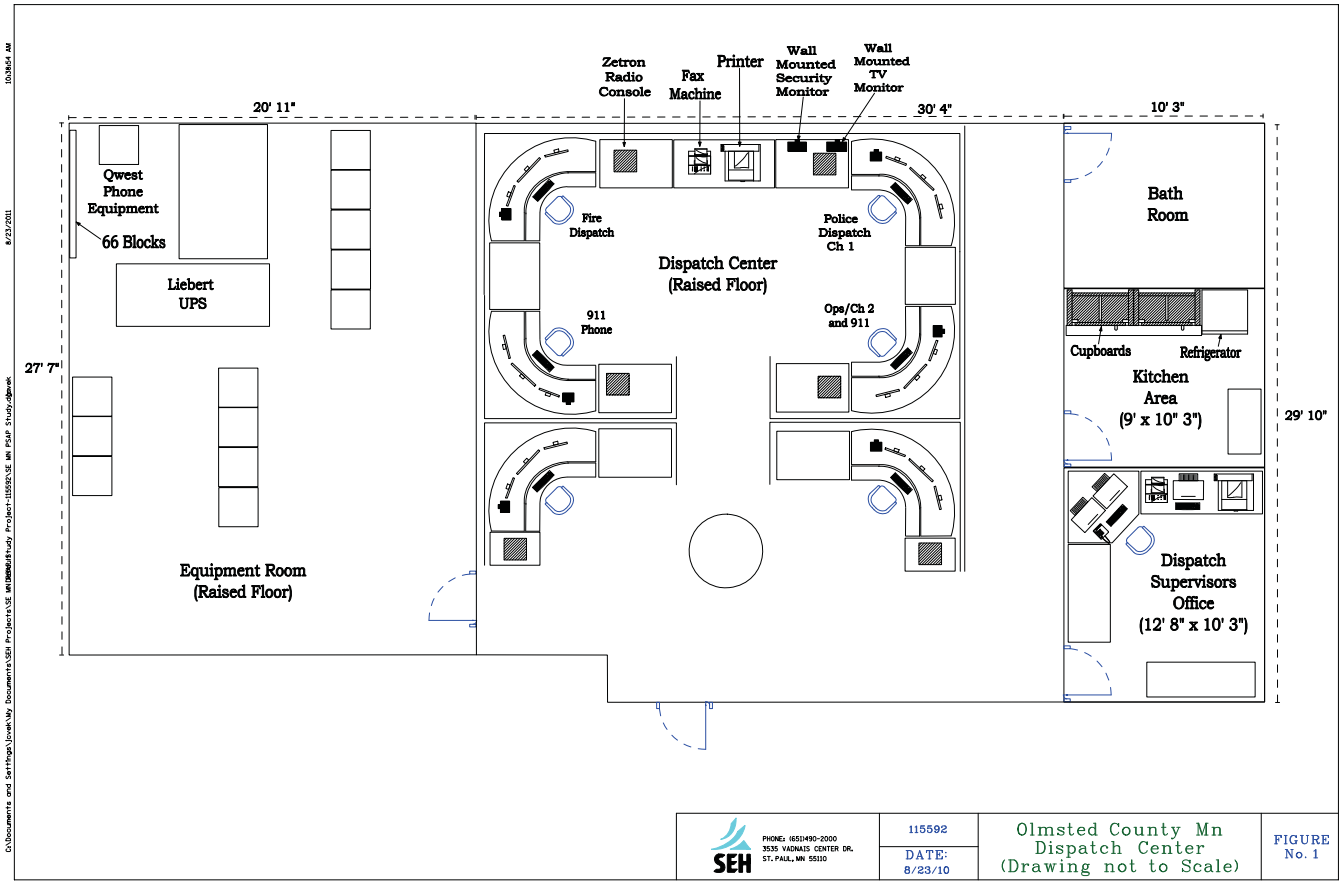
Total Numbers for Dispatch Only		
Total Law Enforcement	2	• **Law** – Rochester PD, Olmsted County; Outside county: Chatfield to Fillmore, Goodhue to Pine Island • **Fire** – Byron, Stewartville, Rochester Fire, Hayfield, Chatfield, Elgin, St. Charles, Zumbro Falls FD, Pine Island, Oronoco, Dover, Eiota • **EMS First Responders** – Chatfield, Eiota, Elgin, St. Charles; All volunteer except Gold Cross, five first responder units with Fire: Pine Island, Stewartville, Byron • **Other Services** – Other: Page County Coroner, Court Security, Warrant Confirmation, Security camera at front door; Direct line ring down from all five fire stations, IBM, Airport, and Public Utilities
Total Fire/Rescue	12	
# of Career	1	
# of Volunteer	11	
Total EMS	4	
Other: such as Animal Control, DOT, etc.	5	
Total Agencies Served	23	

Personnel

- Rochester PD, Gary is the communications manager and reports to the Captain (3 Captains on org chart)
- Four shift supervisors, all working supervisors; Team of six plus a supervisor; Staff of 25
- Shifts – 12 hour shifts, 6AM to 6PM & vice versa, rotating shifts, days and nights every 4 weeks, 3 day weekend every other
- Full-time call-takers/dispatchers– 6 (5 dispatchers)
- Two-Stage Call/Radio – If all 6 dispatch positions were occupied it would be as follows: Law, Fire, 911, Law? Backup Call, Supervisor
- Manager – Civilian
- Telecommunicators – Civilian
- Console Positions – 6

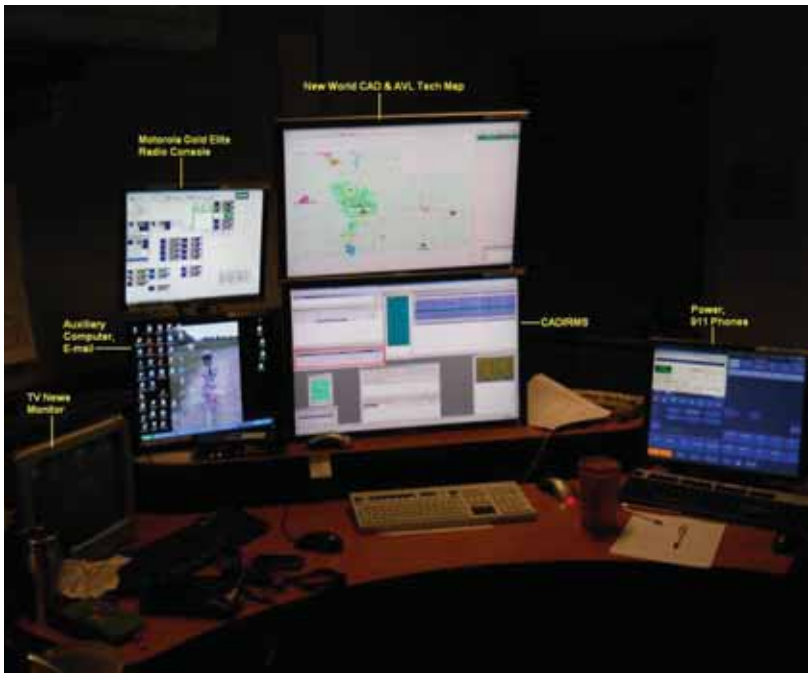
Building Summary

- Dispatch room – 900 sq. ft. + 300 sq. ft. other
- Equipment room – 567 sq. ft. (20'11" x 27' 7", has a raised floor)
  - Adjacent to the PSAP
- Staff/employee break room and/or resting lounge and vending
- Conference room
- Public-shared parking; night-shift parks in front of building



Equipment/Technology Summary

- Facility Network in addition to PSAP – Part of County's system; Request for Viper to update phone system; Qwest provides 911; Have Positron phone in dispatch, ties to VOIP; AVAYA phones county-wide IP
- VOIP – Only phone in dispatch is in supervisor's office
- CAD – New World Systems (integrated system); Went live on November 5th, 1999; Reporting, Mapping, Mobile data
- RMS – New World
- Video Recording System – None
- Recording System/Logging Recorder – Verent Audio Log: Mercom
- Master Clock – Netclock
- Radio consoles – Motorola Gold Elite, 6 positions
- Paging – Fire paging, VHF analog, narrow-band in process
- Internet – County IT
- 911 Trunk lines – 4; Roll to another 4-5 admin; 17 admin lines



CAD	
911 ANI/ALI Interface	YES
State/NCIC Interface	YES
Other Interfaces	YES, Jail, Civil Warrants, RMS Records, CAD
Alphanumeric Paging	YES, V/A console, field reporting, Mobile Data, Mobile Messaging
Automatic Vehicle Location	YES
Emergency Medical Dispatch	NO
Fire Mobile Data	YES
Fire Station Alerting	NO
Fire/EMS Records Management	YES
Mobile Mapping	YES
Police Mobile Data	YES
Police Field Reporting	YES
Police Records Management	YES
Rip & Run	YES
TDD/TTY	YES

911 Phone System

- Positron/Power 911
- 4-911 Trunklines, landline only
- 17 Admin lines
- 4-911 Trunklines, roll to 4-5 admins
- 911 call volume
- Estimated 5,000 calls per month
- 2010 - 24,608 Sheriffs incidents from CAD; 28,010 calls for service
- 2010 – 68,259 PD Incidents; 88,284 PD calls for service

Operations

EMD – No, All go to Gold Cross and handled by them; Some go to rural ambulance (RFD)

Call Processing

- County has requested 4 additional dispatchers
- Sheriffs opted to have 911 cell phone calls come to dispatch rather than MSP; They request with the cell providers that put up towers to have the calls transferred to dispatch; At least 50% of 911 calls are cell phone calls; Non emergency calls do not provide ANI or ALI
- 911 calls all go to county PSAP then transfer if needed; 50% of all 911 calls are cell calls

Operational Costs

- 50% city of Rochester (25% PD, 25% Fire) and 50% Olmsted County
- Do not pay rent, do pay utilities
- Total employee services for 2010 is 1.83M
- $2.2 Million/shared IT as part of budget staff

Training

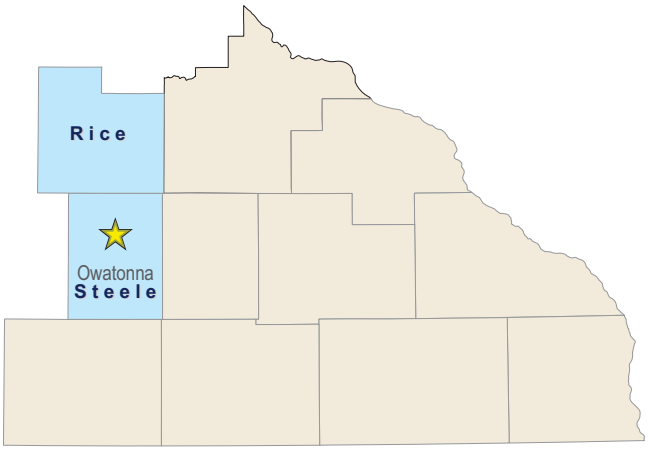
- OJT; FTO's – 3 weeks classroom then training officer for 10 weeks
- Probation for 6 months
- Have proficiency tests and written tests
- Training officers must sign new dispatcher off on each position (Law, Fire, Backup)
- All are cross trained

Back-up Procedures and Facilities

- Generator and UPS; Dispatch will not see any hits from cut over
- Back up for Dodge County and Winona. Have a separate off site at the Rochester airport; Will be moving to new EOC center in near future, four positions + supervisor
- New EOC position will have fiber optic from current dispatch center (currently just a lease T1)
- Have multiple fiber paths into current building
- Recently completed a backup dispatch center move from the Rochester Airport to the Olmsted County EOC located at 1421 3rd Ave SE, Rochester MN
- A condensed version of their main dispatch center; Will have phone, radio, CAD, and recording
- Each fire department can dispatch from their site; Legacy radio systems can page
- Connected to main dispatch center via T1 line; Can operate in conjunction with the main dispatcher
- Have a server that mirrors the main server
- Entire building is on generator, dispatch gets full, other departments get minimal
- Microwave link is not backed up by a lease circuit, use control stations which will hit all ARMER towers

PSAP Site Assessment Summary

Rice/Steele Counties



Demographics

Rice County

2010 Population: 64,142
2000-2010 Population Growth: 13.2%
2005-2009 Households: 21,505
2008 Employment: 23,158
2010 Density: 128.9 Persons/square mile
2000 Land Area: 497.57 square miles

Steele County

2010 Population: 36,576
2000-2010 Population Growth: 8.6%
2005-2009 Households: 13.768
2010 Employment: 20.498
2008 Density: 85.1 Persons/square mile
2000 Land Area: 429.55 square miles

204 East Pearl Street, Owatonna, MN 55060

Contact:
Timothy G. Boyer, Administrator - CEM
507-455-2786
507-363-6584 cell

Alternate Contact:

Technical Contact:
Jeff Nelson, LOGIS

Agencies Served

Total Numbers for Dispatch Only	
Total Law Enforcement	9
Total Fire/Rescue	10
# of Career	2
# of Volunteer	8
Total EMS	3
Other: such as Animal Control, DOT, etc.	–
Total Agencies Served	22

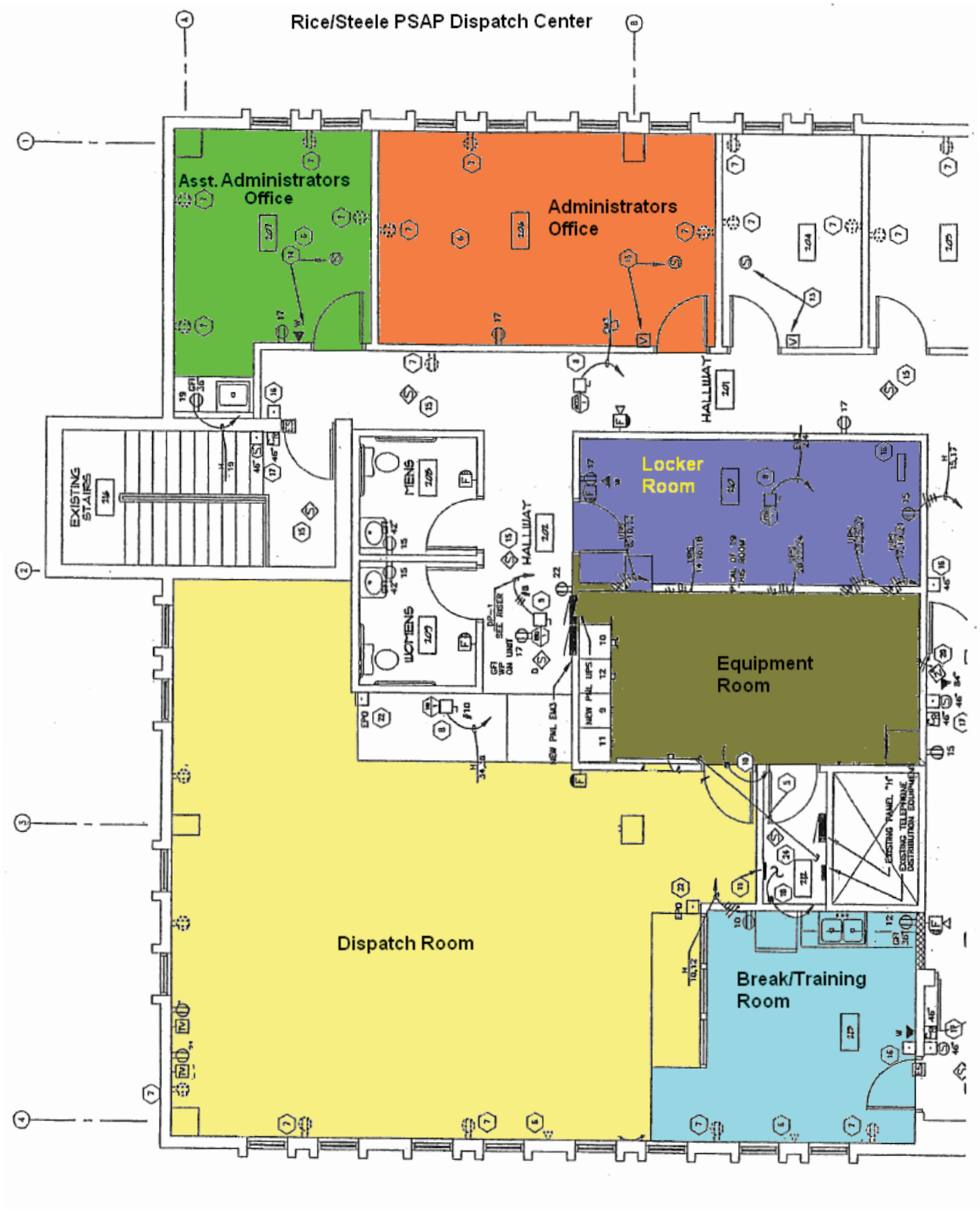
- **Law/Sheriff** – Rice County Sheriff, Steele County Sheriff, Faribault PD, Northfield PD, Lonsdale PD, Dundas PD, Morristown PD, Owatonna PD, Blooming Prairie PD
- **Fire** – Faribault Fire, Northfield Fire, Lonsdale Fire, Morristown Fire, Nerstrand Fire, Owatonna Fire, Medford Fire, Ellendale Fire, Blooming Prairie Fire
- **EMS First Responders** – Faribault Fire (Transfer to North Memorial Ambulance), Northfield Fire (Transfer to Gold Cross), Lonsdale Fire (Transfer to Allina Ambulance), Ellendale Fire (Page Ellendale Ambulance), Blooming Prairie Fire (Page Blooming Prairie Ambulance)
- **Other Services** – Call out for tow trucks, Page weather spotters, Auto dial (code red) notification to residents for any warnings

Personnel

- Full-time – 15
- Part-time – 2
- Shifts – 12 hour shift every other weekend off
- Manager – Civilian
- Telecommunicators – Civilian
- Supervisors – 3, plus Director and Assistant Director
- Operations are 2-stage, 911 call taking and radio dispatcher; All staff are trained to do both and rotate
- Console Positions
  - 911 and Radio – 5 full-time
  - 911 Only – 1 overflow for call taking
  - Minimum of 3 on
  - Maximum of 5 on
- Board made up of 7 people, County and City
- Operations Committee – Fire and Police Clients meet to resolve issues; Unresolved go to Board

Building Summary

- Dispatch room – 640 sq. ft.
- Equipment room – 210 sq. ft.
- No conference room
- Minimal storage
- Parking could be better
- Break room with full functional kitchen including refrigerator, stove, and microwave
- Back-up power – UPS, Quality Power Solution and site generator



Equipment/Technology Summary

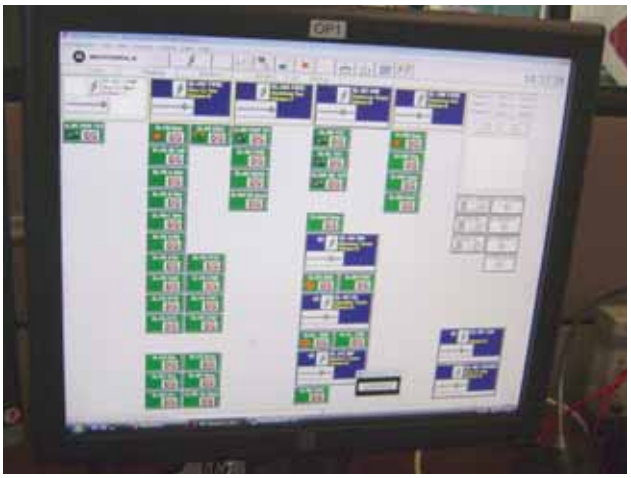
- Facility Network; In addition to PSAP – Data hub at Owatonna Community College, MNET System
- RMS – Part of LOGIS CAD
- Mobile Data – Motorola Mobile Data System (MDC) via Logis, air cards
- GIS Mapping – LOGIS GIS System
- Telephone – Upgraded to the Sentinel Patriot from Cassidian / IES
- Video Recording System – Do not monitor security camera due to liability; Ringdown lines from lobby of PD; Phones for public use
- Logging Recorder – NICE digital logger/Motorola
- Radio Consoles – Motorola MCC 7500
  - Adding sites in Northfield, Owatonna, Faribault, and Owatonna Hospital
- CAD – Motorola through LOGIS; New CAD version Premier 1 in 2012

CAD	
911 ANI/ALI Interface	YES
State/NCIC Interface	YES
Other Interfaces	NO, RMS is shared among LOGIS subscribers; Some Fire records
Alphanumeric Paging	YES, Separate from CAD
Automatic Vehicle Location	YES
Emergency Medical Dispatch	NO
Fire Mobile Data	Minimal/Captain in rig
Fire Station Alerting	NO
Fire/EMS Records Management	YES
Mobile Mapping	YES
Police Mobile Data	YES
Police Field Reporting	YES
Police Records Management	YES
Radio Console/System – Push-to-Talk/Emergency	NO, Possible in future
Rip & Run	YES, Prints to fire
TDD/TTY	YES

911 Phone System

- Landline 911 Trunks – 5
- Wireless 911 Trunks – 0
- 13 Admin lines/POTS Lines on 911 equipment
- 5 ringdowns
- Make busy circuits – can choose any line
- Receive 91 – calls via Internet
- Answer 250,000 call per year

Operations



Operations Policy Manual

EMD – Transfer all medical calls to Gold Cross or Allina

Call Processing

- Operations are 2-stage, 911 call taking and radio dispatcher; All staff are trained to do both and rotate
- No wireless 911 – All go to State Patrol
- Landline 911 calls come directly into PSAP
- All admin lines of 9 law agencies during non-business hours come to Rice/Steele dispatch center (between 5:00 p.m. and 8:00 a.m., on weekends)
- One button transfer, receive ANI and ALI auto to CAD

Operational Costs

- Based on population of Rice (60%) and Steele (40%) Counties pay 100%; No police or fire agencies pay, but buy needed equipment such as radios, MDCs etc.

Training

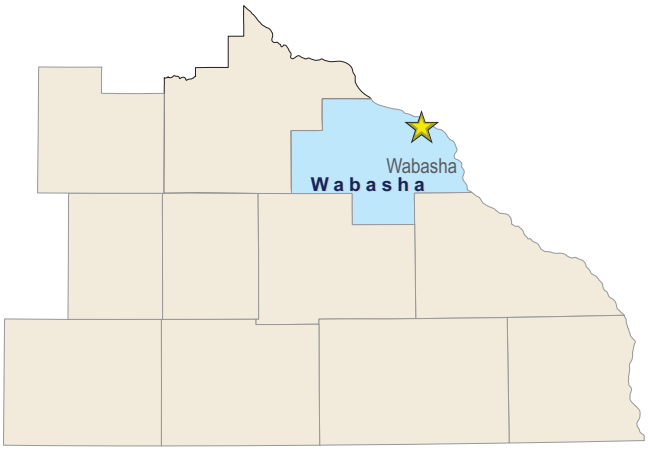
- New Employment – 1 year probation
- Classroom, CJIS, Policy Guidelines, Radio/911 Training
- Train on the floor 90 days with shift supervisor/forms to document, ease into operations

Back-up Procedures and Facilities

- No back-up; Possibly Northfield PD but not tested or trained
- Per LOGIS, it is possible to redirect calls and it would make sense to have another PSAP that is a
- LOGIS user like Dakota County
- Can also use a communications van from the MN State Patrol

PSAP Site Assessment Summary

Wabasha County



Demographics

2010 Population: 21,676
2000-2010 Population Growth: 0.3%
2005-2009 Households: 9,098
2008 Employment: 6,066
2010 Density: 41.3 Persons/square mile
2000 Land Area: 525.01 square miles

848 17th Street East, Suite 1
Wabasha, MN 55981-5033

Contact:
Blain John Hentz
651-565-1006 direct
651-564-0128 cell
Bhentz@co.wabasha.mn.us

Alternate Contact:
Rodney L. Bartsh, Sheriff
651-535-3361
rlbartsh@co.wabasha.mn.us

Technical Contact: Kyle Jervis, IT/Network
Operations Contact: Blain John Hentz

Agencies Served

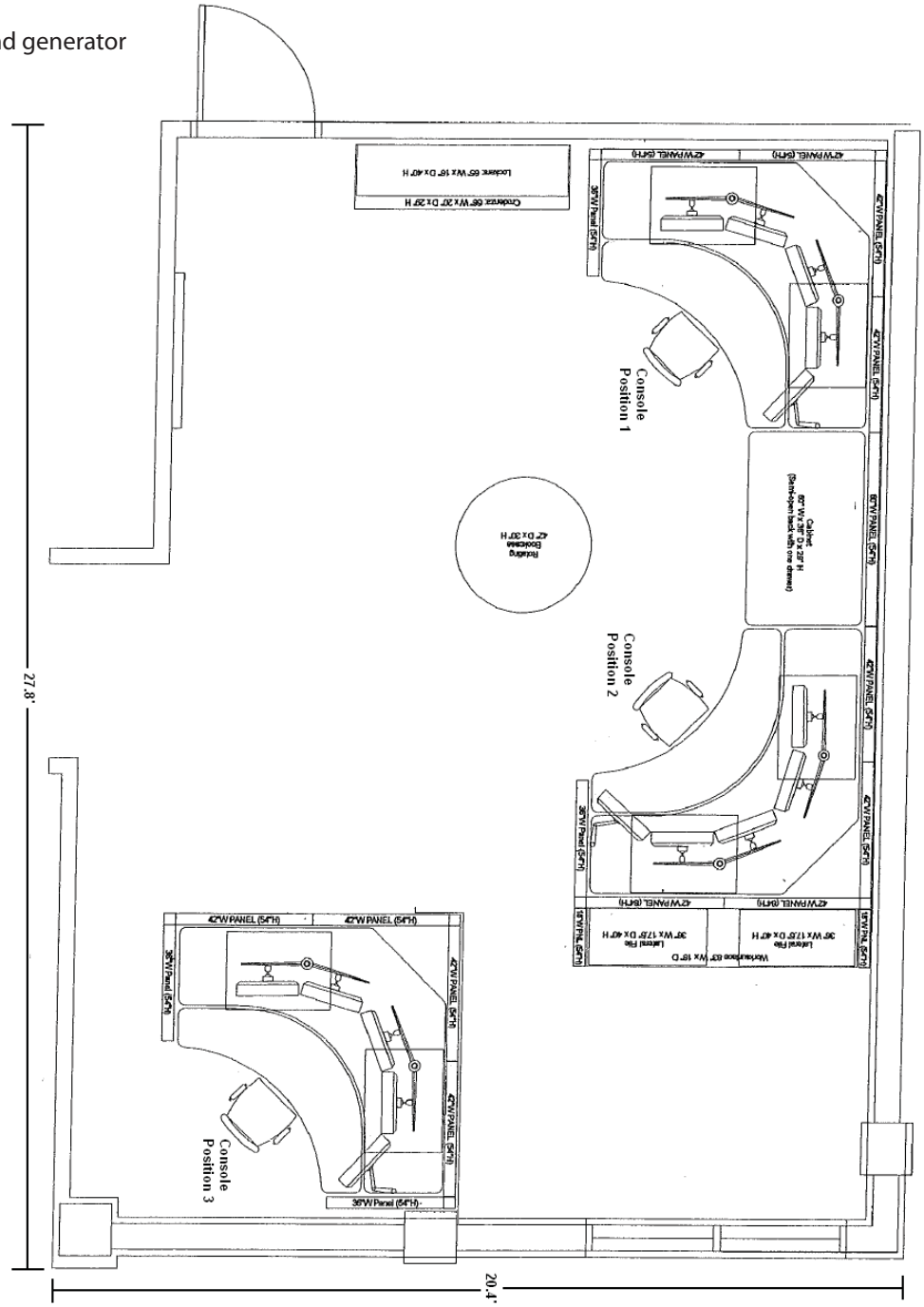
Total Numbers for Dispatch Only		
Total Law Enforcement	4	• **Law** – Wabasha Sheriff, Wabasha PD, Lake City PD, Plane View PD, Kellogg PD, contract with Mazeppa and Elgin; County provides for all, no service contracts • **Fire** – Lake City, Zumbro Falls*, Elgin, Kellogg*, Mazeppa, Plainview, Wabasha Fire (All Volunteer) • **EMS First Responders** – Zumbro Falls, Mazeppa, Kellogg • **Ambulance:** Lake City (2 Full-time, also have paramedics), Kellogg, Plane View • **Other Services** – Public Utilities (Xcel, City Water), DNR, State Patrol, Parks, Jail (transports, schedule/trip plan, Jail visitation, video visitation) * Interop with County highway (Wabasha), can talk to CP Rail Dispatch (via phone)
Total Fire/Rescue	7	
# of Career	0	
# of Volunteer	All	
Total EMS	3	
Other: such as Animal Control, DOT, etc.	3	
Total Agencies Served	17	

Personnel

- Sheriff
- Chief Deputy
- Full-time – 10
- Part-time – 3
- Shifts – 12-hour, 2-on-2-off, 3-on-3-off
- Dispatch Manager – 2 FTO day and night, work as field training officers
- TAC officers, 1 in dispatch, 1 in jail, both are full-time – 2
- 1 Floater
- Standard Dispatchers (Night/Day) – 2
- Dispatcher 1 – Warrant Auditing
- Dispatcher 2 – Warrant Properties
- Manager – Civilian, 1 part-time Lake City Officer
- Telecommunicators – Most are Civilian
- Manager does not work console as part of the regular shift; Do fill in for events or overload
- Single Stage
- Console Positions
  – 911 and Radio – 3
  – 911 Only – 0
  – Radio Only – 1

Building Summary

- Dispatch room – 548 sq. ft.
- Equipment room – 19' x 13', 247 SF
  - 5 equipment racks with overhead cable ladder racks, climate controlled, additional space available
- Conference room shared with Sheriff
- EOC training room
- Facility could be considered for expansion
- 1 for dispatch, 1 shared, both have refrigerator and microwave, vending in shared in break area
- Good availability/employee parking
- Night shift has dedicated parking spots to allow for snow removal
- Concerns for flooding
- Back-up Power – UPS and generator



Equipment/Technology Summary

- Facility Network in addition to PSAP – County IT
- VOIP – Yes, jail is digital
- RMS – CIS
- GIS Mapping – County GIS Tool, Bulberry and CIS
- Computer network infrastructure system
- Video Recording System – ICOP, video in squads, down load to servers, dispatch monitors facility, not jail
- Recording System/Logging Recorder – NICE for 800/VOIP
  - Eventide for analog – Jail, Sheriff, Admin, no Dispatch
  - Master Clock – Spectracom, not for EAS
  - Viper call management system
- Touch screens and flat screens
- Radio consoles – Motorola MCC 7500
- Paging – Legacy VHF
- CAD – CIS

CAD	
911 ANI/ALI Interface	YES
State/NCIC Interface	YES
Other Interfaces	NO, MDC
Alphanumeric Paging	NO, Consoles
Automatic Vehicle Location	NO
Emergency Medical Dispatch	NO
Fire Mobile Data	NO
Fire Station Alerting	VHF paging, agency incident log
Fire/EMS Records Management	YES, ICR
Mapping	YES
Police Mobile Data	NO
Police Field Reporting	YES, Partial, word processing only
Police Records Management	YES
Rip & Run	NO
TDD/TTY	YES

911 Phone System

- Positron
- 4-911 lines (2 landline, 2 wireless), roll to Admin lines
- 8 Admin lines
- Make busy circuits –
- 911 call volume –
- Administrative call button

Operations

EMD – None, goal

Call Processing

- Get 911 wireless direct/some from Wisconsin (deal with Peppin, Buffalo, and Pierce counties in Wisconsin)
- Issue with switch or ANI/ALI with Wisconsin
- Landline 911 calls come directly into PSAP
- More calls transferred in from State Patrol than Direct
- Majority are one button transfers
- Receive initial caller information then one button transfer; Receive confirmation prior to releasing caller

Operational Costs

- No Fee structure to collect or re-coup; Typical $100K per year operating cost with out labor; (maintenance, phones, equipment, supplies)

Training

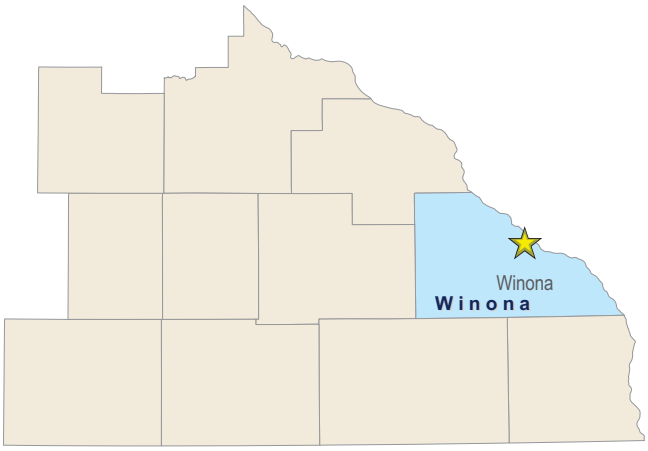
- Dispatch protocols/manual, working on documentation
- BCA certification required
- 2 month process, feedback/observation/FTO's
- Training on days and nights
- 1 year probation

Back-up Procedures and Facilities

- Lake City as EOC for special events/floods, communications van from the MN State Patrol
- Agreement with Goodhue County as back-up, transfer 911 and they can dispatch
- Each fire department can dispatch from their site; Legacy radio systems can page
- City of Wabasha has flood concerns, PSAP can get isolated causing transportation issues with transportation routes

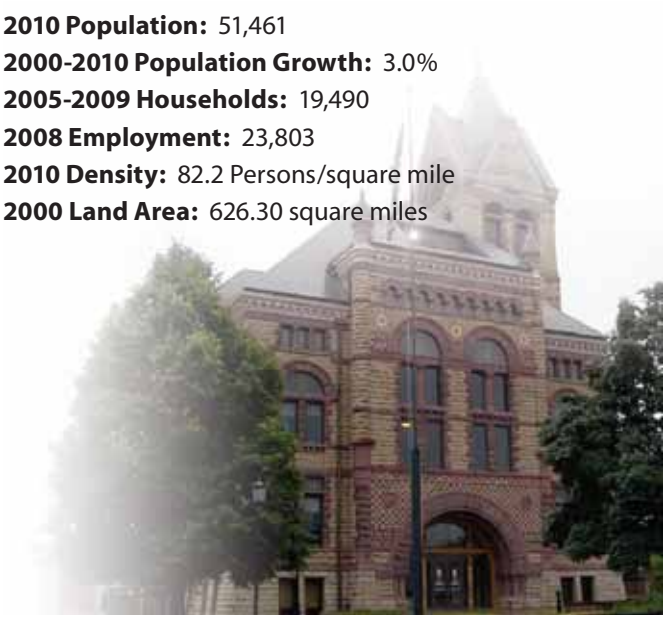
PSAP Site Assessment Summary

Winona County



Demographics

2010 Population: 51,461
2000-2010 Population Growth: 3.0%
2005-2009 Households: 19,490
2008 Employment: 23,803
2010 Density: 82.2 Persons/square mile
2000 Land Area: 626.30 square miles



201 West 3rd Street, Winona, MN 55987

Contact:
Mike Peterson
PSAP Supervisor
507.457.6498
mpeterson@co.winona.mn.us

Alternate Contact:
Mark Anderson – Winona County IT

Technical Contact:
Sandy Warnke, Sheriff Admin – CAD

Agencies Served

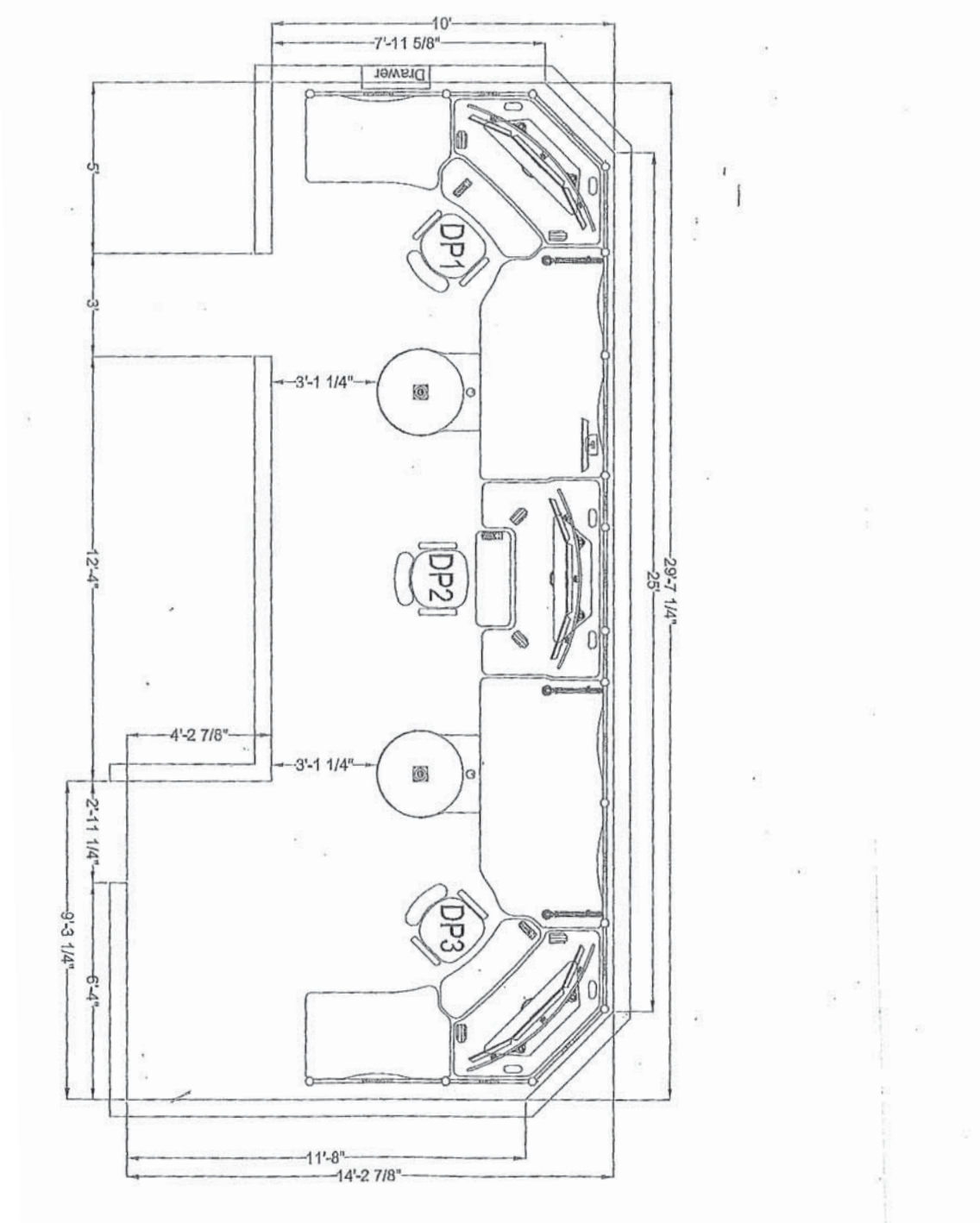
Total Numbers for Dispatch Only		
Total Law Enforcement	5	• **Law** – County Sheriff, Winona PD, Goodview PD, Lewiston PD, St. Charles PD • **Fire** – Winona FD (full-time), Goodview FD, Minnesota City FD, Rolling Stone FD, Lewiston FD, St. Charles FD, Wilson FD, Ridgeway FD, Nodine FD, Pickwick FD, La Crescent FD, Attura FD, Dakota FD, Hidden Valley FD, Plainview FD • **EMS First Responders** – Stockton and Elba Ambulance, Winona (full-time), Altura, Lewiston, St. Charles, Tristate, Rushford, Plainview (fire and ambulance); 2 Air, Medlink and Mayo; Gunderson Disp Center in WI dispatches Winona and Tristate ambulance • **Other Services** – County Admin, Highway Dept, U.S. Fish and Wildlife, Court Security, Winona City Courts, Jail Control Point (doors), monitor facilities
Total Fire/Rescue	15	
# of Career	11	
# of Volunteer	14	
Total EMS	7	
Other: such as Animal Control, DOT, etc.	2	
Total Agencies Served	29	

Personnel

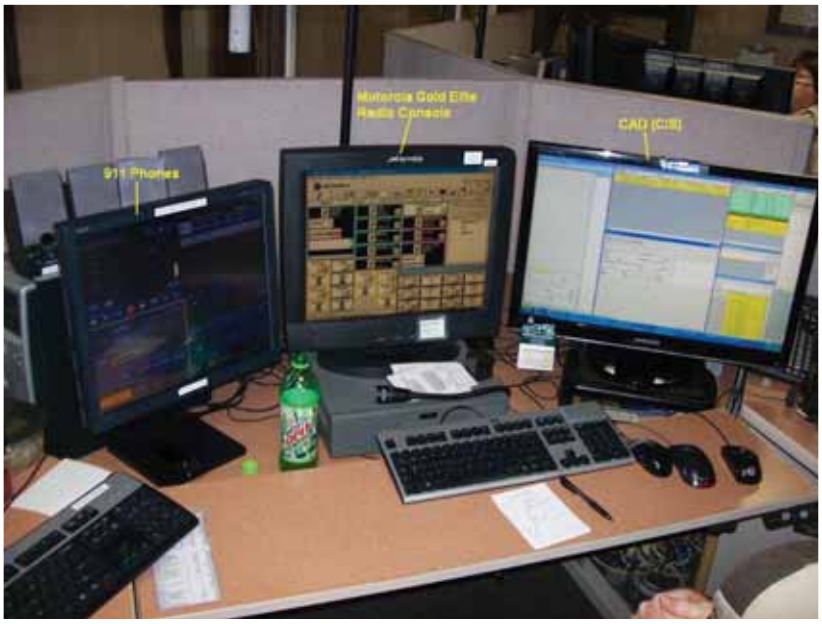
- PSAP Supervisor – 1
  - Shared Dispatch with City of Winona
- Full-time Dispaterers – 12
- Part-time Dispatcher – 1
- 8.5 hour day, afternoon and night shifts; 4 days on, 2 days off; Minimum 2 on, often have a 3rd, 3 floating positions fill vacation
- Call Taking – Single Stage
- Manager – Civilian
- Telecommunicators – Civilian
- Console Positions
  - 911 and Radio – 3
  - Exploring future 4th position; Union contract with LELS

Building Summary

- Dispatch room – 326 sq. ft.
- Equipment room – 144 sq. ft.
  - Climate controlled
  - Below the Dispatch center and below ground level; Very tight for space
  - No expansion space
- Shared training room in the basement
  - Not adjacent to dispatch
- No lockers
- Break room in the basement
  - Not adjacent to dispatch
- Shared parking lot; There is paid reserved parking if employee chooses
- Back-up Power – UPS and generator



Equipment/Technology Summary



- Facility Network in addition to PSAP – Yes, County IT
- VOIP – Within County buildings
- Telephone – Qwest Life Line, (Positron), 7 years old
- RMS – CIS
- Mobile Data – CIS for Winona only
- GIS Mapping – Base map through CIS, County added layer, towns, driveway points; Pictometry is CIS plug in
- Video Recording System – IT function, not dispatch; Can be played back in dispatch
- Recording System/Logging Recorder – MACTEK (Analog), HigherGround; Looking to upgrade to digital (NICE)
- Master Clock – GPS clock
- Radio consoles – Motorola Gold Elite, Upgrading to Motorola MCC 7500
- Paging – VHF Analog, Narrow-band in process
- CAD – CIS, could share with Wabasha and Goodhue, Houston and Fillmore
  - Latest, update, within the last 6 months
  - Installed over 10 years ago
- Internet – County IT

CAD	
911 ANI/ALI Interface	YES
State/NCIC Interface	YES
Other Interfaces	–
Alphanumeric Paging	YES, Pictometry Interface
Automatic Vehicle Location	NO
Emergency Medical Dispatch	NO
Fire Mobile Data	NO (Has not used)
Fire Station Alerting	NO
Fire/EMS Records Management	YES
Mobile Mapping	YES
Police Mobile Data	YES, Winona
Police Field Reporting	YES, Update call for services
Police Records Management	YES, Could be expanded
RAdio Console/System Push-to-Talk/Emergency	NO
Rip & Run	YES
TDD/TTY	Has for phones but not linked to CAD
Laptops for Winona PD, no AVL, have CAD	–

911 Phone System

- Poistron Life Line
- 4-911 trunks all shared, landline and wireless
- 3 VOIP Admin lines/POTS lines on 911 equipment
- 3 Analog Admin lines/POTS lines on 911 equipment
- Command vehicles have cell phones; No satellite phones (Emergency Management may have SAT Phones)
- Touch screens on phones

Operations

EMD – None – Looking at using Gunderson Medical Dispatch in LaCrosse WI, transfer calls

Call Processing

- All landline calls come into the PSAP, they will then call out the appropriate agency
- Some border calls may get transferred to adjacent Counties
- Cell calls are split by cell site, set up at Winona to go directly to MN State Patrol, Hwy 61 to MSP
- Some cell towers in Wisconsin are split between Winona County, MN and Buffalo County, WI

Operational Costs

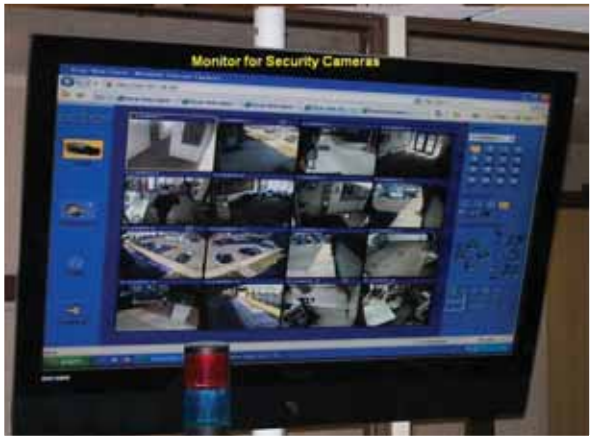
- No other cities pay (except Winona)
- Not based on population or volume

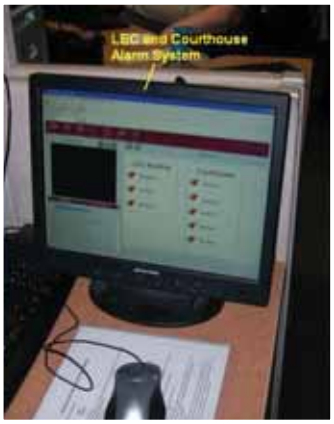
Training

- Training manual with phases
- Ride along with officers
- Mapping
- Radio seminars
- Work with dispatchers, shadow then add tasks
- 3 months if experienced, 9 months if not
- Looking into adding a 911 simulator

Back-up Procedures and Facilities

- On paper – process for evacuation, have Qwest route calls to Rochester PD, not able to dispatch, would need radio communications van
- No official backup site
- 2 mobile communications vehicles (1 van, 1 trailer) for temporary radio and paging





Appendix B

PSAP Site Interview Responses

MN Southeast PSAP Consolidation, Site Assessment Interview Comments

Dodge County:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - Interoperability among counties and cities that participate, better records and information sharing, sharing neighbor's assets.
   - Money and Staffing, less costly to do one for 4 counties vs. 10 counties.
   - Olmsted County has a mobile command center unit that is available to all counties.

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - Some consolidation limits to individual counties to get their own assets.
   - Lose control of your own center, community rapport, walk up window; people get turned into a number.
   - Loss of personal touch, inside knowledge of the territory, loss of personal touch between the dispatcher and officers, deputy's etc. People still call in on admin line with local references.

3. What roadblocks do you think may prevent a successful consolidation of any type?
   - Dispatching relationships with deputies. Instinct/Feedback from those that have left.
   - Would have to all operate on the same procedures.
   - Potential business issues with Jail. Steele County for Jail?

4. What incentives would encourage your agency to consolidate?
   - If it makes sense, it will happen and if location and process makes sense. Has to logically make sense (don't think incentives would be needed if it makes sense).
   - County does not have any large business or industry that provides financial income (i.e. Wal-Mart or Target).
   - Some counties may swap services, i.e. one will have the dispatch center while the other has the jail etc. For major events, can use S.E. MN Emergency Ops Command Van.

Fillmore County:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - Sharing of technology and expenses, standard platforms.
   - Very open to consolidation.
   - Can improve service and save money. Open to solutions, look for long term changes to get rid of silos, reduce cost. Can get support & share technology & resources to help improve each other, can improve service and save money.

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - Worry about losing public service by not being local.
   - Will take time for entities to buy into the consolidation.
   - Fire and Ambulance services are aging, want local service.
   - Younger generation is more open.

3. What roadblocks do you think may prevent a successful consolidation of any type?
   - Space limitations. Rushford is a feasible option. It has its own generator and is self sufficient.
   - Jobs, losing jobs, long commutes.
   - Reality that it may not be a cost savings. Pay rates, Difference in staffing wages, larger city would pay more.
   - How to balance and distribute costs.

4. What incentives would encourage your agency to consolidate?
   - Grants, politics – all have to agree.
   - Demonstrated financial savings.
   - Politics have traditionally been an issue.
   - Sheriff may agree, board may not or vice-versa.
   - County Commissioner is chair of AMC.

Freeborn County:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - Relocation - If dispatch is located far away it will have a negative impact on the county, will be missing the local connection. Info gets lost. Don't want to lose employees.
   - Current investment in the dispatch center, difficult to give up.
   - Positives: Money savings.

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - If dispatch was located in Albert Lea it could reduce costs and increase the economic development.
   - There is talk about the county doing the dispatching instead of the city, could do an expansion. County would take over the dispatching. If it coincides with the consolidation, it would be a real positive.

3. What roadblocks do you think may prevent a successful consolidation of any type?
   - Technology investment. Incompatibility of systems, software licenses etc. could make consolidation difficult.
   - CIS operation would be a big investment. Jail, civil process and records use CIS, as do Faribault, Waseca and Dodge Counties. Rice and Steele looking into it.

4. What incentives would encourage your agency to consolidate?
   - Incentives will play a large part of consolidation.
   - Would likely need to be financial benefit/savings or incentive.

Goodhue County:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - No trouble with this issue. Have good working relationship with the southeast counties.
   - Understand need to save money, could be savings in buying technology.
   - Would take consolidation of 3 or more sites to benefit from technology savings.

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - Winona and Wabasha are already talking a lot and using the same platforms.
   - Would like to see CIS connect systems.
   - There has been a lot of discuss with those who have different technologies.
   - Goodhue has an excellent IT tech.

3. What roadblocks do you think may prevent a successful consolidation of any type?
   - Location, not an issue if Goodhue is one of the sites. Hardest thing is potential for relocation.
   - Technology, connectivity and sharing of platforms should be easy.
   - Understand need for cost savings.
   - Public will have to be reeducated.

4. What incentives would encourage your agency to consolidate?
   - Already had discussion with Wabasha.
   - Site visits/layout concept/have demos of CAD rooms.
   - Need agreements on processing.
   - Educate public to assure level of service. (Dakota County suffered from poor service in their consolidation, did not research enough. Should have had experienced people on each shift thru learning. They do not have decent mapping to help through process. Knowledge and geography is usually a big issue during transition).

Houston County:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - Look at ways to share technology, RMS, logging options etc. as a big positive.
   - Possible work load sharing, share dispatching on off hours (dog watch sharing).
   - Negatives, minimum dispatching requirements due to BOC. Cannot eliminate some staff.
   - Can use extra help during the day.

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - Hope to save money on technology and services.
   - Dispatcher counts in minimum compliment for the Jail (DOC), so even if the dispatch function were eliminated, Houston County would still need the staff.

3. What roadblocks do you think may prevent a successful consolidation of any type?
   - Loss of personal touch.
   - Most resistance will come from Firemen and Ambulance who want local dispatching.
   - Law is more open to consolidation if it comes with a more professional level of service and dedicated service shared with the jail.
   - Do not think consolidation would happen even if costs were neutral.

4. What incentives would encourage your agency to consolidate?
   - Administrators want to look at how to save money. Cost savings is one of the biggest factors.
   - Share of technology platforms.
   - Grants would help.
   - Hope the PSAP Consolidation report can find ways to improve service or save money through technology.

Mower County:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - City/County is skeptical but will look at ideas from cost perspective. Issue with Service/Governance problems.
   - Maybe some cost savings in equipment (very expensive), could get more bang for the buck. Current officers don't like consolidation.
   - Commissioners are interested if it saves money.

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - Loss of jobs. Potential to relocate is a problem.
   - Records, how do you consolidate? Send people to Albert Lea?
   - Share all the equipment and keep from laying someone off or commuting long distance.
   - Concern for service levels, Governance, loss of jobs, relocate staff.
   - What happens to current equipment? Cost to move equipment is expensive.

3. What roadblocks do you think may prevent a successful consolidation of any type?
   - Will you duplicate the function, where are the cost savings? There are different levels of service in each County.
   - Fear of loss of service to citizens.
   - Logistics and differences between counties, different methodology.

4. What incentives would encourage your agency to consolidate?
   - Biggest incentive is to have the consolidated PSAP local.
   - Financial incentives, grants, cost savings etc. if the hub is at your PSAP.
   - Would need financial investment to cover initial capital costs.
   - Difficult with people leaving during the process (Marlys retiring).

Olmsted County:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - Olmsted is willing to host if the city and county are willing to. Good job market for hiring.
   - Feel like hosting is best approach. Governance, currently works well.
   - Other input from more counties/cities. Process multiple agencies with different processes.
   - What are the policies? (Gas drive offs, city does one area, county does another).

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - Cost savings.
   - Share technology but will lose personal touch.
   - Potential for improved coordination. Need improvement in cost and service level.
   - Could co-host with technology.
   - Could lose control of ownership even if there are cost savings.
   - Smaller counties see Rochester as too big.

3. What roadblocks do you think may prevent a successful consolidation of any type?
   - Governance, how is it going to flow? Concerns for differing opinions on how it should be run.
   - Try to keep everyone on the same page. There are different policies for each county.
   - Loss of personal touch, loss of control.
   - Different CAD systems.
   - Look at those entities who have joined and then left (Maplewood and Ramsey), talk to the workers.

4. What incentives would encourage your agency to consolidate?
   - Cost savings, needs to be a substantial savings to justify losing control of county and personal touch.
   - City is in the process of submitting request for new dispatch center to be built with new Fire Hall. Current center would then be the backup.

Rice/Steele Counties:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - Cost savings, needs to be a substantial savings to justify losing control of county and personal touch.
   - City is in the process of submitting request for new dispatch center to be built with new Fire Hall. Current center would then be the backup.

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - (N/A)

3. What roadblocks do you think may prevent a successful consolidation of any type?
   - Provide potential for back-ups.
   - Sharing backend equipment would be an advantage.
   - Like the idea of virtual dispatching between centers.
   - Help with staffing when dispatch employees call in sick, work load sharing.

4. What incentives would encourage your agency to consolidate?
   - Cops grant helped Rice/Steele to move, RSC admin went after grants. Also helped pay for MDC's.
   - Politicians were the cheerleaders for the projects.
   - Grants/seed money (covered 40% for RSC).
   - Communicating is critical, must trickle down.

Wabasha County:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - Had a study done years back. Economics plays a big part of it.
   - Now on the ARMER system and have the benefit of shared technology.
   - Agree with consolidation to a point. Do not like one big PSAP as you will lose the personal touch.
   - Prefer three smaller PSAPs combined in such a way that they know each other's territories.

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - Share technology resources.
   - Population base is more stable.
   - Tax and revenue is a big driver for efficiency.

3. What roadblocks do you think may prevent a successful consolidation of any type?
   - Politics.
   - Domain control (in favor only if it's at my PSAP).
   - Space availability.
   - Up front capitol costs and how long to recoup.

4. What incentives would encourage your agency to consolidate?
   - Cost savings/technology
   - Sit down and work out details/involvement in decisions.
   - Locals want a voice in the decision and want to be heard/control on governance.

Winona County:

1. What positives and negatives do you see resulting from some form of PSAP consolidation?
   - Better chance for advances in technology, can share between centers.
   - Potential cost savings, greater efficiency.

2. What positives and negatives do you see resulting from some form of PSAP / Dispatch consolidation?
   - Perception of reduced service.
   - Loss of jobs in Winona (may not be able to relocate).
   - Labor issues with unions.

3. What roadblocks do you think may prevent a successful consolidation of any type?
    - Policy and procedures, some Sheriffs and Police Chiefs want it done their way.
    - Volunteer fire has a bigger user group (along with law).
    - Belief that it is a reduction in service (lack of knowledge).
    - Reporting to the board rather than the Sheriff may be an issue.

4. What incentives would encourage your agency to consolidate?
    - Mainly financial (grants) or county savings in dollars.
    - Efficiency.
    - Operational savings.

Appendix C

Policy Survey Questionnaire

SE Minnesota Public Safety Answering Point (PSAP) Consolidation Study

Policy Survey Questions

(County Commissioners, City Council Members, Sheriffs, Police Chiefs, Fire Chiefs, EMS Managers)

The South East Minnesota Regional Radio Board is conducting a feasibility study of combining dispatch services and records management services for the Counties of Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha, Winona, and the Cities of Rochester and Winona. The SE MN Regional PSAP Consolidation Study Group is committed to providing, and potentially enhancing, public safety communications for the increased safety of Minnesota residents in this difficult economic and ever advancing technology environment. In order to successfully deliver the objectives outlined in this feasibility study project, the Study Group is interested in input from public safety policy makers and leaders that will have direct decision making authority over the PSAP consolidation or shared services project.

Please respond to the following brief information collection survey.

1. Do you currently operate dispatch services from a Multi-Agency Dispatch center?

   a. Yes

   b. No

   c. If yes, do you know when the center began providing multi-agency shared services?
   Year? _____

2. Has your City / County transitioned or merged dispatch centers during your career?

   a. No

   b. Yes

   d. If yes, please provide comments about what worked and did not work in your opinion:

   _____

   _____

3. Which of the following best describes your position in relation to the PSAP?

   a. County Commissioner / City Council

   b. Sheriff / Police Chief

   c. Fire Chief

   d. EMS Manager

   e. Other: _____

4. A successful PSAP consolidation effort typically strives for some of the following major benefits: ongoing operational cost savings, operational efficiency, improved level of performance and service,

enhanced technology. Please rate what you consider to be the most important criteria for determining success of a PSAP consolidation (1 being the highest priority, 5 being the lowest priority)?

_____ Improved efficiency

_____ Improved level of service

_____ Minimize Initial Cost Outlay

_____ Reduced Life Cycle/ Operational Costs

_____ Improved Technologies and Capabilities.

5. How interested are you in "hosting" a Consolidated PSAP center?

   a. We have been exploring the possibility of consolidation and are ready to host or provide services to multiple counties or regionally.

   b. We have been considering consolidation and would host if it makes the most sense and is supported by others.

   c. We have not considered consolidation and have no preference or opposition to hosting.

   d. We are not interested in hosting a consolidated center and would retain our own current PSAP rather than join a center hosted by others.

   e. No opinion, I would defer to others for this decision.

6. If a consolidation effort is pursued and the determination is that the PSAP will be operated in a county other than your own, would you still be interested in participating in the consolidation effort?

   a. Yes. If consolidation makes sense and the financial and governance issues are acceptable, we would join regardless of the physical location.

   b. No. Regardless of the PSAP consolidation details, we would only join if the PSAP were located in our jurisdiction.

   c. Other – Comments: _____

7. How heavily does constituent approval weigh into your decision to consolidate?

   a. I must have strong consensus in order to support joining a Consolidated PSAP.

   b. Constituent approval is important, but only to a point, if the decision makes fiscal and operational sense I will proceed.

   c. In this economic environment, if it can be shown to be cost effective and not diminish service levels, even with little constituent approval we must proceed.

   d. Comment: _____

8. Do you have a preferred style of ownership/ operation for a Consolidated PSAP?

   a. Independently operated via multiagency joint powers agreement.

   b. Owner/operator arrangement where one agency owns and operates the PSAP center and contracts out services to other agencies for a fee.

   c. Privatized services.

   d. Other - Specify: _____

9. Typically one advantage of a Consolidated PSAP is a reduction in total staff compliment compared to multiple independent centers. What is your preferred approach to staff accommodations?

   a. All existing staff should be offered the opportunity to transition to the new PSAP. Over time staff reductions can occur through attrition to obtain the desired level.

   b. Staff the new consolidated PSAP as appropriate and let each joining agency determine the disposition of current staff.

   c. Follow current bargaining unit agreements as required and staff the new center to meet its required compliment.

   d. Other: _____

10. Pleased provide any additional information or comments you would like to offer regarding PSAP Consolidation.

_____

_____

_____

_____

If you have any questions or need additional information you may contact any one of the following project resources:

Andy Terry
SEH
651.470.2147

Scott McNurlin, Sheriff
Goodhue County Sheriff
651.267.2621

Appendix D

First Responders Survey Questionnaire

SE Minnesota Public Safety Answering Point (PSAP) Consolidation Study
First Responders Survey Questions

The South East Minnesota Regional Radio Board is conducting a feasibility study of combining dispatch services and records management services for the Counties of Dodge, Fillmore, Freeborn, Goodhue, Houston, Mower, Olmsted, Rice, Steele, Wabasha, Winona, and the Cities of Rochester and Winona. The SE MN Regional PSAP Consolidation Study Group is committed to providing, and potentially enhancing, public safety communications for the increased safety of Minnesota residents in this difficult economic and ever advancing technology environment. In order to successfully deliver the objectives outlined in this feasibility study project, the Study Group is interested in input from public safety professionals and first responders that are the primary providers and recipients of service from these PSAPs.

Please respond to the following brief information collection survey.

1. Do you currently receive dispatch services from a Multi-Agency Dispatch center?
   a. Yes
   b. No
   c. If yes, do you know when the center began providing multi-agency shared services? Year?

   _____

   _____

2. Has your agency transitioned or merged dispatch centers during your career?
   a. No
   b. Yes
   c. If yes, please provide comments about what worked and did not work in your opinion:

   _____

   _____

   _____

3. Which of the following best describes your current relationship to the PSAP?
   a. Dispatcher
   b. Law Enforcement
   c. Fire Responder
   d. Ambulance Service
   e. Public Works / Highway
   f. Other: _____

4. How many years of service do you have?

   a. 0-5 Years

   b. 5-10 Years

   c. 10-15 Years

   d. 15-20 Years

   e. More than 20 years

5.

   A. Does your current PSAP center have the following, please select all that apply.

      1. Mobile Data

      2. Automatic Vehicle Location

      3. Records Management Software

      4. Computer Aided Dispatch (CAD)

      5. In Vehicle Mapping / Route Guidance

      6. ARMER 800MHz Radio system

   B. In a consolidated environment do you believe these elements are:

      1. Necessary

      2. "Nice to Have"

      3. Unnecessary

      4. Other: _____

6.

   A. Historically, consolidating a PSAP raises concern over diminished service due to dispatchers having inconsistent knowledge or familiarity of the service area and a lack of relationship with emergency responders. Do you share this view?

      a. Yes

      b. No

      c. Comments: _____

B. If you answered Yes to 6.A, do you believe any of the following tools aid in resolution of this issue. Select all that apply.

Improved technology (Mapping, AVL, CAD)

Additional training for dispatchers and responders

Increased staffing levels in dispatch

Others:

Comments:

7. List your top 3 issues or concerns with consolidated PSAP center(s) in your region:

a. _____

b. _____

c. _____

8. Please provide any additional comments about consolidated PSAP centers.

_____

_____

_____

If you have any questions or need additional information (no matter what jurisdiction you are in), you may contact any one of the following project resources:

Andy Terry
SEH, Inc.
651.470.2147

Scott McNurlin, Sheriff
Goodhue County Sheriff
651.267.2621

Appendix E

Erlang C Model

Full Table with Consolidation Options

SEH

SE MN PSAP Consolidation Options Based on 2010 911, Radio and Wireless Call Volumes

JCC
Updated 05/15/11

PSAP Staffing Level and call volumes for 10 Centers											Erlang C Calculations							
MN SE County PSAP	Authorized Staffing (Including Supervisors)	Supervisory	Full Time	Part Time FTE Equivalent	Actual 2010 Total Calls	Estimated Radio Traffic	Estimated CAD Records	Total Phone, Radio & ICR Calls	25% Work Load Factor	Staff/Calls Per Day Ratio	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Dispatchers Required/8 Hour Shift	Dispatchers Required 24 x 7	Dispatch Adjustment	Adjustment Factor	Recommended Staff
Dodge	9.2	1	4	4.2	49655	100567	14563	164785	205981	61.34	23.51	40	2	2	8.4	0.84	1.10	9.2
Fillmore	7	1	4	2	66718	87367	44701	198786	248483	97.25	28.37	40	2	2	8.4	0.84	1.10	9.2
Freeborn	10	1	8	1	23117	46234	41646	110997	138746	38.01	15.84	40	2	2	8.4	0.84	1.10	9.2
Goodhue	12	2	10	0	110208	258289	47543	416040	520050	118.73	59.37	40	2	3	12.6	1.26	1.10	13.9
Houston	9	2	7	0	45990	83220	30813	160023	200029	60.89	22.83	40	2	2	8.4	0.84	1.10	9.2
Mower	10.75	1	9	0.75	135747	249782	90950	476479	595599	151.79	67.99	40	2	3	12.6	1.26	1.10	13.9
Olmsted	25	5	20	0	205717	411434	97565	714716	893395	97.91	101.99	40	2	4	16.8	8.40	1.50	25.2
Rice/Steele	21	5	15	1	166248	332496	123985	622729	778411	101.55	88.86	40	2	3	12.6	3.15	1.25	15.8
Wabasha	11	1	8	2	55122	110244	36932	202298	252872	62.98	28.87	40	2	2	8.4	0.84	1.10	9.2
Winona	13.25	1	12	0.25	139217	266095	36571	441883	552354	114.21	63.05	40	2	3	12.6	1.26	1.10	13.9
Total	128.2	20	97	11.2	997739	1945728	565270	3508737	4385921	93.73					109.2			128.7

* Grey = Estimated Data

PSAP Staffing Level and estimated call volumes for 4 Centers, Geographic											Erlang C Calculations							
MN SE County PSAP	Authorized Staffing	Supervisory	Full Time	Part Time	Actual 2010 Total Calls	Estimated Radio Traffic	Estimated CAD Records	Total Radio & ICR Calls	25% Work Load Factor	Staff/Calls Per Day Ratio	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Dispatchers Required/8 Hour Shift	Dispatchers Required 24 x 7	Dispatch Adjustment	Adjustment Factor	Recommended Staff
North	32.2	4	22	6	214985	469100	99038	783123	978903	83.29	111.75	40	2	4	16.8	8.40	1.50	25.2
South East	29.25	4	23	2.25	251925	436682	112085	800692	1000865	93.75	114.25	40	2	4	16.8	8.40	1.50	25.2
South West	41.75	7	32	3	325112	628512	256581	1210205	1512757	99.27	172.69	40	2	5	21	15.75	1.75	36.8
Olmsted	25	5	20	0	205717	411434	97565	714716	893395	97.91	101.99	40	2	4	16.8	8.40	1.50	25.2
Total	128.2	20	97	11.2	997739	1945728	565270	3508737	4385921	93.73					71.4			112.4

(North = consolidation of Dodge, Goodhue & Wabasha Counties)
(Southeast = consolidation of Fillmore, Houston & Winona Counties)
(Southwest = consolidation of Freeborn, Mower & Rice/Steele Counties)

PSAP Staffing Level and estimated call volumes for 4 Centers, CAD											Erlang C Calculations							
MN SE County PSAP	Authorized Staffing	Supervisory	Full Time	Part Time	Actual 2010 Total Calls	Estimated Radio Traffic	Estimated CAD Records	Total Radio & ICR Calls	25% Work Load Factor	Staff/Calls Per Day Ratio	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Dispatchers Required/8 Hour Shift	Dispatchers Required 24 x 7	Dispatch Adjustment	Adjustment Factor	Recommended Staff
North	55.45	6	42	7.45	377319	781429	177254.74	1336003	1670003	82.51	190.64	40	2	5	21	15.75	1.75	36.8
South East	26.75	4	20	2.75	248455	420369	166464.85	835289	1044111	106.94	119.19	40	2	4	16.8	8.40	1.50	25.2
South West	21	5	15	1	166248	332496	123985	622729	778411	101.55	88.86	40	2	3	12.6	3.15	1.25	15.8
Olmsted	25	5	20	0	205717	411434	97565	714716	893395	97.91	101.99	40	2	4	16.8	8.40	1.50	25.2
Total	128.2	20	97	11.2	997739	1945728	565270	3508737	4385921	93.73					67.2			102.9

(North, CIS CAD = consolidation of Dodge, Freeborn, Goodhue, Wabasha & Winona Counties)
(Southeast, Various CAD = consolidation of Fillmore, Houston & Mower Counties)
(Southwest, LOGIS CAD = Rice/Steele Counties)
(Olmsted, New World CAD)

SE MN PSAP Consolidation Options Based on 2010 911, Radio and Wireless Call Volumes

JCC
Updated 05/15/11

PSAP Staffing Level and estimated call volumes for 3 Centers, Geographic											Erlang C Calculations							
MN SE County PSAP	Authorized Staffing	Supervisory	Full Time	Part Time	Actual 2010 Total Calls	Estimated Radio Traffic	Estimated CAD Records	Total Radio & ICR Calls	25% Work Load Factor	Staff/Calls Per Day Ratio	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Dispatchers Required/8 Hour Shift	Dispatchers Required 24 x 7	Dispatch Adjustment	Adjustment Factor	Recommended Staff
North	57.2	9	42	6.2	420702	880534	196602.74	1497839	1872298	89.68	213.73	40	2	5	21	15.75	1.75	36.8
South East	29.25	4	23	2.25	251925	436682	112085.36	800692	1000865	93.75	114.25	40	2	4	16.8	8.40	1.50	25.2
South West	41.75	7	32	2.75	325112	628512	256581.49	1210205	1512757	99.27	172.69	40	2	5	21	15.75	1.75	36.8
Total	128.2	20	97	11.2	997739	1945728	565270	3508737	4385921	93.73					58.8			98.7

(North = consolidation of Dodge, Goodhue, Wabasha & Olmsted Counties)
(Southeast = consolidation of Fillmore, Houston & Winona Counties)
(Southwest = consolidation of Freeborn, Mower, & Rice/Steele Counties)

PSAP Staffing Level and estimated call volumes for 3 Centers, Transportation											Erlang C Calculations							
MN SE County PSAP	Authorized Staffing	Supervisory	Full Time	Part Time	Actual 2010 Total Calls	Estimated Radio Traffic	Estimated CAD Records	Total Radio & ICR Calls	25% Work Load Factor	Staff/Calls Per Day Ratio	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Dispatchers Required/8 Hour Shift	Dispatchers Required 24 x 7	Dispatch Adjustment	Adjustment Factor	Recommended Staff
Hwy 61	45.25	6	37	2.25	350537	717848	151859.04	1220244	1525305	92.35	174.12	40	2	5	21	15.75	1.75	36.8
I 90/Hwy 14	51.95	8	37	6.95	457837	849150	247779.55	1554767	1943458	102.49	221.86	40	2	5	21	15.75	1.75	36.8
I 35	31	6	23	2	189365	378730	165631	733726	917158	81.06	104.70	40	2	4	16.8	8.40	1.50	25.2
Total	128.2	20	97	11.2	997739	1945728	565270	3508737	4385921	93.73					58.8			98.7

(Hwy 61 = consolidation of Goodhue, Wabasha, Winona & Houston Counties)
(I 90/Hwy 14 = consolidation of Dodge, Olmsted, Mower & Fillmore Counties)
(I 35 = consolidation of Freeborn, & Rice/Steele Counties)

PSAP Staffing Level and estimated call volumes for 2 Centers, North - South											Erlang C Calculations							
MN SE County PSAP	Authorized Staffing	Supervisory	Full Time	Part Time	Actual 2010 Total Calls	Estimated Radio Traffic	Estimated CAD Records	Total Radio & ICR Calls	25% Work Load Factor	Staff/Calls Per Day Ratio	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Dispatchers Required/8 Hour Shift	Dispatchers Required 24 x 7	Dispatch Adjustment	Adjustment Factor	Recommended Staff
North	66.45	10	49	7.45	520450	1067691	259593.74	1847735	2309668	95.23	263.66	40	2	6	25.2	25.20	2.00	50.4
South	61.75	10	48	3.75	477289	878037	305675.85	1661002	2076252	92.12	237.02	40	2	6	25.2	25.20	2.00	50.4
Total	128.2	20	97	11.2	997739	1945728	565270	3508737	4385921	93.73					50.4			100.8

(North = consolidation of Dodge, Goodhue, Rice/Steele, Wabasha & Winona Counties)
(South = consolidation of Freeborn, Fillmore, Houston, Mower, & Olmsted Counties)

PSAP Staffing Level and estimated call volumes for 2 Centers, East - West											Erlang C Calculations							
MN SE County PSAP	Authorized Staffing	Supervisory	Full Time	Part Time	Actual 2010 Total Calls	Estimated Radio Traffic	Estimated CAD Records	Total Radio & ICR Calls	25% Work Load Factor	Staff/Calls Per Day Ratio	Calls per hour	Typical Call duration (seconds)	Average delay (seconds)	Dispatchers Required/8 Hour Shift	Dispatchers Required 24 x 7	Dispatch Adjustment	Adjustment Factor	Recommended Staff
East	65.25	10	51	4.25	512764	958360	246582.1	1717706	2147133	90.15	245.11	40	2	6	25.2	25.20	2.00	50.4
West	62.95	10	46	6.95	484975	987368	318687.49	1791030	2238788	97.44	255.57	40	2	6	25.2	25.20	2.00	50.4
Total	128.2	20	97	11.2	997739	1945728	565270	3508737	4385921	93.73					50.4			100.8

(East = consolidation of Fillmore, Houston, Olmsted, Wabasha & Winona Counties)
(West = consolidation of Dodge, Freeborn, Goodhue, Mower & Rice/Steele Counties)
*** Assumptions:** Where estimated, radio traffic = 2 x Total Call Activity; where estimated CAD records = Total Call Activity/2
Adjustment Factor introduced to accommodate additional staffing, complexity, and coordination needed for larger autonomous PSAP operations.

Phase II Report - Business Plan for Consolidated PSAP Options

Southeast Minnesota PSAP Consolidation Study

For the Southeast Minnesota Regional Radio Board

SEH No. SMRRB 115592

June 2012

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Southeast Minnesota PSAP Consolidation Study
Phase II Report - Business Plan for Consolidated PSAP Options
For the Southeast Minnesota Regional Radio Board

SEH No. SMRRB 115592

June 2012

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Phase II Report - Business Plan for Consolidated PSAP Options

Southeast Minnesota PSAP Consolidation Study

Prepared for Southeast Minnesota Regional Radio Board

1.0 Executive Summary

This report develops and explores various options and models for consolidation or restructuring the dispatch services. The vision and goals of the consolidation project are outlined, and dispatch levels of service and operational procedures are explored and recommended. In addition, the concept of operation for the centers is defined and potential preliminary designs for the centers are also included.

The Analysis and Feasibility Study phase of this project provided an in-depth review of the present PSAP situation in the Southeast Minnesota Region. Each of the current 10 PSAPs has a unique character, set of customers, and individualized operating environment. However, there are also many common operating parameters and functions that are shared by all of the centers in the region. The findings of the Analysis and Feasibility Study included: Center Operations, Customers, Staffing, Costs/Budgets, Equipment Capabilities, Physical Space / Facilities, Feasibility of Consolidation – Political/Policy Maker Input, and Feasibility of Consolidation – First Responder Input.

In 2004 the Minnesota Department of Public Safety conducted a study of PSAP Consolidations in the State of Minnesota and created some best practices guidelines. Their report to the Legislature indentifies the following as potential PSAP Consolidation models for Greater Minnesota PSAPs. In greater Minnesota, the models fall into three general categories that were discussed by the PSAP Study Group: Intra-county Consolidation, Multi-county Consolidation, and Regional Consolidation.

In addition to these types of consolidation options, the PSAP Study Group also reviewed and discussed the potential for these additional consolidation options: Co-location and Virtual Consolidation.

Each of these various consolidation alternatives was discussed by the Study Group and a determination was made to focus the attention of the business planning process on the multi-county regional consolidation option. To further narrow the scope of the business planning task there was a need to identify which of the various consolidation alternatives should be studies in detail. The PSAP Study Group voted on all the possible consolidation scenarios and selected the 4-center, 3-center, and 2-center as the preferred consolidated options scenarios plus looking at a “Virtual Dispatch Consolidation” option.

As part of the options analysis specific goals and objectives were developed through project meetings discussions, survey results and individual county personnel interviews. In no particular order, the following goals and objectives were identified: improved service levels, cost savings through economics of scale, improved communications interoperability, and equity and fairness in the process and outcomes

This report provides an in-depth analysis of the 4-center, 3-center and 2-centers options. Each option has a section in this report devoted to that particular option. The alignment and selection of the counties affiliated with each proposed center is based on geographic proximity and a desire to balance the population distribution and call volume activity within the region.

One of the goals of this analysis required that customers traditionally served by the current 10 PSAPs would continue to be served from any restructured configuration. Additionally, part of the analysis was to determine to what extent, if any, the level of services to these customers could be at a minimum maintained and ideally improved through the restructuring process. As a result, it is acknowledged that some services, although possible to provide remotely through the use of technology, would be provided with a higher level of service and more cost effectively if these services were provided locally. Some of the services not proposed for inclusion in this consolidation plan are: walk up window customer service, after-hours facility access, monitoring building cameras, primary or backup jailer functions, business time administrative call activity, administrative typing and filing tasks, and other general clerical or support functions not considered traditional E-911 PSAP center core functions. It is anticipated that agencies participating in a consolidated PSAP project will need to look at some level of work process re-engineering, to reassign or eliminate some non-dispatch tasks. One example of this may be to replace late night telephone answering services with voice mail systems. In other instances, some current staff positions will likely need to be retained at existing sites or some form of task and service re-engineering will be needed to accommodate those services not incorporated into a consolidated operation.

The restructuring of the current PSAPs to create the 4-center, 3-center and 2-center models will change the proximity, availability and relationship between the communications personnel and the current Sheriff's offices, local police departments, and to some extent fire and EMS Service personnel. Depending on the final locations of the new centers there will be certain customers that no longer house a communication center. Reportability of the communications center organization structure is an important consideration to the creation of the new model of providing dispatch services for the region.

To help assure that all counties involved in a dispatch consolidation receive a comparable level of services there are advantages to having the centers report through a new management level position to a new joint powers board structure created by adoption of a Joint Powers Agreement (JPA). The JPA membership should be representative of all participants in the PSAP. Section 8 of this report discusses Governance Structure options in more detail. For the 4- center consolidation option, more so than for the 3 or 2-center models, the option of a host agency - fee for services model is also an appropriate means of managing the new centers. Regardless of the governance model chosen in any center consolidation option, it is recommended to include a dedicated Communications Center Manager and additional Shift Supervisor positions.

Within each of the new centers the proposed staffing plan should include a Communication Center Manager that will report to the JPA Board. The Communication Center Manager will

be responsible for all aspects of the PSAPs operations, staffing, and delivery of services. Each option plan provides for Radio Communication Supervisor positions and Radio Communication Operators. Because of the autonomous nature of a stand-alone PSAP that is not able to rely on a host agency for typical overhead support services in house, this plan proposes the addition of one administrative support staff position and one information technology staff position for each center.

The staff levels for each option were determined using a traditional approach to building a staffing estimate for a consolidated center that projects staff need based on current center work load (measured volume or calls, dispatches, and records created) known as the Erlang C staffing model. The Erlang C is a traffic modeling formula used in call center scheduling to calculate delays or predict waiting times for callers. Erlang C also calculates the resources that will be needed to keep wait times within the call center's target limits. The Erlang C traffic model estimates how many dispatchers are needed in a call center.

These computational recommendations were then compared against real world data to determine if the recommendation is appropriate. A comparison was made against four known call centers with similar characteristics. Two different metrics were used for the comparison; total population serviced and total annual call volume processed. Research was done to collect data from 12 different active dispatch centers ranging in size, population, and activity level. The comparisons offered a check and balance approach to the calculation methods, and some reassurance of accuracy for the proposed staff level recommendations. Tables included in this report provide baseline call volume and staffing data provided by each of the 10 PSAPs in the region. The tables also project staffing estimates for dispatcher staff levels to accommodate the aggregate call volumes for potential future PSAP configurations and the comparison to existing centers with staff counts for these actual operational centers.

Staffing estimates are based on the number of employees available to staff a center, the number of dispatch positions actively staffed at any one time, the number of supervisory staff, and the availability of staff to support unexpected events all play a role in the level of service provided by a center. Events such as disasters and large emergencies require a larger pool of staff to sustain PSAP operations through a major emergency crisis. It is also important to adequately staff the center because when individuals call in sick, take extended leaves, or require training that impacts the ability of a center to provide a high level of service. Staffing levels and staff performance will impact levels of service during the restructuring transition and the ongoing levels of service provided from each current PSAP. Staffing considerations will also have a significant impact on the cost of the restructuring effort.

This plan proposes that existing personnel in the current PSAPs will be encouraged to relocate to the new consolidated centers. The dispatchers from each represented county would come with different starting salaries and benefits. The cost estimates in this plan allow for Average Salary levels based on the highest average from the perspective joining centers. Governance and transition planning will need to establish baseline benefits such as base salary range, benefits, seniority and any other related issues. Even if employment at the newly created PSAP will represent a new employment relationship, consideration will need to be given to establishing a relationship between tenure and compensation and benefits for transitioning staff. The goals established by the PSAP Study Group called for policies that provide, at a minimum, parity, as well as an improved opportunity for employment as to what exists for the current PSAPs for each participating county. For staff that chose not to relocate

to the new consolidated center, the participating agency PSAP will use existing contract allowances such as encouraging severance and retraining benefits.

All PSAP options proposed in these scenarios will operate 24 hour per day, 365 days per year. The services provided by the centers will replicate as much as practical the services currently provided from the 10 current PSAPs in the region. There may be some administrative telephone calls and peripheral agency specific administrative work that the current PSAPs perform that is not done from the new consolidated centers.

This plan recommends that the services provided by the PSAP should be well defined and documented in Customer Service Level Agreements that accompany any contract or Joint Powers governance model. Administrative calls currently make up a significant percentage of call volume and activity for the individual PSAPs. The staffing levels determined by the Erlang C Model and the subsequent comparisons with real world PSAPs suggest that a determination of how administrative call traffic is supported in a consolidated environment will have a bearing on staffing requirements and may alter the staff levels reflected in this Business Plan.

The migration from 10 PSAPs in the Southeast Minnesota region to consolidated PSAPs will require a Capital investment in technology upgrades, relocation, and integration. Attention to technology requirements and establishment of a goal of uniformity and compatibility of technologies used within the geographic jurisdiction of each of the centers is important. This plan strives to assure the new centers operate effectively, adequately support the demands of consolidated operations, meet industry standards and best practices, and prepare for the necessary expansion of systems and technologies. There will continue to be some variation in the technologies deployed among the new PSAPs based on the unique nature of the counties they currently serve and the differing system elements that have been deployed in different PSAPs throughout the southeast region. The primary systems considered for migration to a new center configuration include: next generation E-911 telephone system, multiple position radio dispatch workstations, uniform computer aided dispatch systems and records management, monitors, displays, servers, call recording system, support of mobile data infrastructure, support of radio system infrastructure, and local and remote video security systems.

The new consolidated PSAP centers will require the standardization of CAD systems and it will be required to choose a single system for each center. Spreadsheets for each consolidated center option show current CAD features used by each county and what would be required in a consolidated PSAP. Tables also provide a template for the technology elements being planned for deployment at the PSAPs. This template may be used during the technology and migration planning for this project. The template may also be useful through deployment and cutover phases of the project as a check list to verify each technology element as it is deployed, tested and accepted for final operation.

The new consolidated PSAP centers will have to obtain several files from the counties that will be consolidated. For counties that have the same CAD software, this is as simple as updating the file with the area to be dispatched and does not involve file conversions. It most likely will involve data entry work on the consolidated PSAP's CAD program.

For the consolidated counties that have different software, a standardized CAD program will need to be chosen and file conversions done to get the data into the consolidated PSAP's

CAD system. Selection of a CAD system that already exists for one of the counties existing PSAP facilities will reduce file conversion costs.

Dispatcher Radio Console systems are used to communicate with field personnel and other agencies. In many PSAP centers, the Radio Console system interfaces with the CAD system to provide the dispatcher with the identification of radios/units calling to enhance communications. The consolidate PSAP will most likely be part of the Minnesota State ARMER system. Currently only two (2) types of radio consoles have been approved for peer level connection to the ARMER system backbone, the Motorola Gold-Elite and the MCC 7500. Motorola announced the intent to cancel the Gold-Elite consoles with the last order date of September 30th, 2011 and the last ship date of December 31st, 2011. Tables shows the type of console systems each county currently has in there dispatch centers.

The primary criteria that drive space requirements include: the number, size and proximity of PSAP workstations; associated staffing considerations such as lockers, break room and conference rooms; electronic equipment and back up capability spaces; and future expansion needs. Other primary considerations for the facility include its geographic location and proximity within the region served; the capacity, robustness, and resiliency of building electrical, mechanical, and communication systems; physical security of the center, and the potential for related uses such as regional Emergency Operations Centers or regional training facilities.

Creation of the consolidated PSAPs will provide the opportunity to create new work spaces for all of those sites except for the Central Olmsted County Center noted in the 4-center option. None of the current centers has expansion space on their current dispatch floor to accommodate the number of staff or associated work stations in their current centers without some level of remodeling or expansion of current facility. There are, however, several opportunities to create adequate space by expanding within several of the existing centers, occupying adjacent spaces and upgrading to accommodate the additional staff and work stations required by the new centers PSAP configuration. The recommended space requirement for each PSAP is provided in a facility Space Requirement Table for each option. The square footage is driven by the number of call taker and dispatcher positions that were developed using the Erlang C model based on workload information provided by the existing PSAPs.

The migration from 10 centers to a new configuration of 4, 3 or 2 consolidated PSAP dispatch centers will require an initial investment in facilities remodeling and expansion, staffing relocation, and new technology implementation. The operation of the new centers will also have continuing operating costs. The estimated project costs for configuration scenarios are derived from several sources including 2010 SE MN PSAP operating budget figures, Office of Enterprise Technology, Qwest estimates of telecommunications costs, and SEH estimated technology system and hardware costs.

Regardless of what governance model is adopted, there are several key elements that should be considered for incorporation in the model. Section 8 provides a list that represents common elements found in shared services agreements such as composition of the board, budget development, membership requirements, etc.

Three broad primary governance options exist for PSAP governance in a consolidated environment. One governance option is where an operating division within the structure of a participating government manages and operates the consolidated center. In this model, the

PSAP operates independently of the public safety agencies that it serves. The PSAP director functions as a department head, reporting to the same position as other department heads. Ramsey County, MN is an example of this model.

A second governance option is where a consolidated center is managed by a participating agency. In this model, which has been the dominant model to date, the PSAP is operated by a participating law enforcement, fire or EMS agency. There is often a non-sworn PSAP manager who reports to a sworn supervisor, commander or depending upon agency size, the Chief.

A third governance option is where a consolidated center is organized and managed through a Joint Powers Agreement. In this governance model, the consolidated PSAP is not part of a larger agency or government structure, but exists as an independent entity headed by a civilian director. The director traditionally reports to a board comprised of representatives of the participating members. Examples of this model include the Rice-Steele Consolidated Communications Center and the Dakota Communications Center in Dakota County, MN.

In Section 8 each option is described with the major positive and negative attributes.

In any operation shared by two or more entities, the allocation of operating and capital costs has the potential to be the most contentious issue for the stakeholders to resolve. While all participants agree that the cost allocation must be fair, the judgment of fairness can be very subjective and very much in the eye of the beholder. This report stops short of providing a recommendation on a cost allocation model for the consolidation currently under study; however, it does provide a high level overview of common methods in use today.

A very common method is usage based systems that attempt to connect costs to the workload that each participating entity actually creates for the PSAP. Common examples are 9-1-1 calls or assigned CAD events attributable to each member. Another common method is population based and contribution rates for each member are based upon the census population data for that jurisdiction. A third method is the hybrid model that calculates PSAP contribution rates for funding using a combination of factors; PSAP usage, property values and population are common factors.

The organizational model chosen for the region will influence the governance and cost allocation decisions that follow. The study group may need to establish a governance subcommittee to develop recommendations for consideration of the larger group. Once the study group has reached agreement on organization, governance and cost allocation, participating jurisdictions will need to review and ultimately consider approval. Reaching a final agreement review the agreement and suggest modifications.

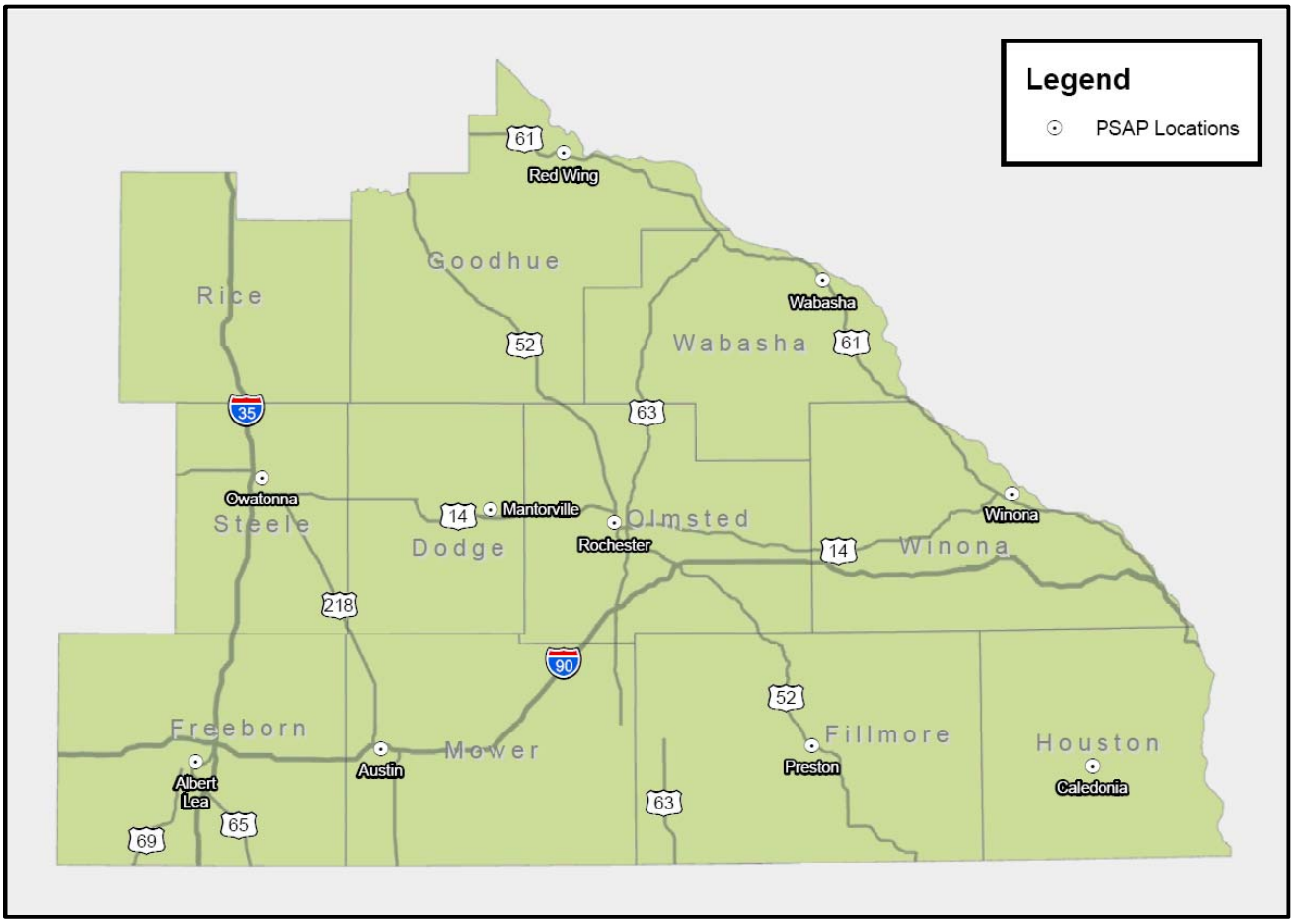
Lastly, this report looks at potential finance options that public safety communications agencies considering major upgrades in equipment, staffing or looking at consolidations have considered to obtain funds, many with grants or financial assistance from government agencies.

2.0 Present Situation

The Public Safety Answering Point's (PSAP) in the Southeast Minnesota Region currently provide 911 call taking, emergency dispatching, warning siren activation and other communications related services. For all 10 PSAPs in the region this includes 24-hour incident and emergency response, including cellular 911 calls, multi-agency dispatching and interagency communications.

In defining a PSAP, Minnesota Statute 403.02 defines one as: ". . .a communications facility operated on a 24 hour basis which first receives 911 calls from persons in a 911 service area and which may, as appropriate, directly dispatch public safety services or extend, transfer, or relay 911 calls to appropriate public safety agencies." Of the 11 Counties that make up the Southeast Region in Minnesota, there are a total of 10 PSAP Centers. Rice and Steele counties operate a single consolidated PSAP for both counties in Owatonna MN. Below is a map reflecting the counties in the Minnesota Southeast Region and PSAP locations.

Figure 1 – Map of SE MN PSAP Locations



Prior to creation of this Business Plan document an Analysis and Feasibility study was conducted that documented each of the centers current operations, customers served, services provided, staffing and call activity levels, operational costs, and technology considerations that impact consolidation business planning.

Each of the current 10 PSAPs has a unique character, set of customers, and individualized operating environment. However, there are also many common operating parameters and functions that are shared by all of the centers in the region. The following summarizes the findings of the Analysis and Feasibility Study:

- **Center Operations:** There is a strong commonality among the current centers that will aid in the potential transition to a consolidated PSAP. Differences in the types and level of services provided from the current centers, differences in common CAD system technology, records management processes, and variations is staffing policies could be obstacles to successful transition.
- **Customers:** Each of the existing centers currently serves multiple agencies and multiple jurisdictions. Transitioning to a consolidated PSAP would simply expand on the current geographic foot print of a center. Consolidation would likely improve operations in the fire service by eliminating the need for center to center call transfers and the additional coordination often required for response by agencies that serve areas outside their current geographic boundaries. Not all current customers or services provided by each individual center would continue to receive service from a consolidated PSAP. These services and customers need to be identified and planned for through the business planning process to assure that alternate methods or providers are identified for each of the customers or services not incorporated into a consolidated PSAP plan.
- **Staffing, service levels, call volumes:** There are currently 128 fulltime equivalent positions operating from the 10 centers in Southeast Minnesota Region. Combined they handled over 3.5 million measurable call, radio or CAD tasks in 2010. The centers also support a wide variety of non-measurable agency and customer support activities. Looking at the measureable work load to maintain a public safety grade Quality of Service standard preliminary analysis predicts that a potential staffing level of between 98 to 112 positions is possible depending on the consolidation scenario deployed. There are a large number of common services provide from the current PSAPs that can be consolidated. That said, some services are not conducive to being supported or provided from a new consolidated center. At least some current staff positions will likely need to be retained at existing sites or some form of task and service reengineering will be needed to accommodate those services not incorporated into a consolidated operation.
- **Costs / Budgets:** Numerous factors play into developing costs and budgets for a consolidation effort. Using data supplied by the current PSAP operations a baseline can be established. Cost should be a serious factor in determining the direction but it should not be the overall driving force. Cost savings may be realized in the long-haul but improved efficiency and level of service can usually be achieved early in the consolidation process. The analysis of current PSAP expenditures suggests that savings should be achievable in personnel costs, although the actual amount will be dependent on which consolidation scenario(s) are implemented. The business plan will provide a more detailed analysis of projected operational costs for each scenario. Total costs will also be impacted by the need to reassign, re-engineer or eliminate the “non-dispatch” tasks, such as records entry, lobby service, vehicle impound releases, etc., currently performed by dispatchers in several centers. Experience in other consolidations has shown that sharing the purchase, maintenance and support of PSAP core technologies such as Next-Generation 9-1-1 equipment, logging recorders and CAD systems provide the greatest potential for cost savings. Depending upon consolidation scenario(s) and governance structure, the consolidated PSAP may need to budget for certain support costs, which are not included in many of the current PSAPs budgets. Facility management, human

resources, legal and fiscal services are often not included in agency-hosted PSAPs but must be accounted for in the consolidated PSAP.

- **Equipment Capabilities:** There are four significant technology areas, with potential cost implications to consider in the PSAP consolidation planning effort: E-911 phone audio logging; radio system and console equipment, CAD and records management software tools, and mobile computing capabilities. Of these four key technology considerations the region is well positioned in 3 of the 4 areas to allow some form of technology consolidation. For the E-911 issue, opportunities exist for cost savings and platform standardization because many of the counties have not yet made upgrade investments. The radio system and console equipment area is for the most part standardized on the ARMER backbone with Motorola console equipment. Although the CAD environment is not standardized in the region, the CIS platform does serve 5 of the 11 counties. There are also 3 counties that have not made a significant CAD investment so the timing for consolidation may allow for savings in this area compared to each of these counties going it alone. The mobile computing / AVL environment is one area that will likely need significant investment to bring all users up to a common level of capability and also has a significant impact on the potential for service level improvements for dispatch and emergency responders in the region.
- **Physical Space / facilities:** The facility and physical space requirements for the PSAP consolidation can be a major cost consideration and can have a significant impact on the operations of the center. The site assessments identified several locations that present opportunities for expansion of existing spaces to accommodate a consolidated center. Planning for a new PSAP facility or expansion of an existing center should consider all aspects of the facility including the building site, the location within the region, security and access, center layout, utilities and redundant systems, etc. Once consolidation models are established that identify the alignment of the counties within the region and the staffing requirements of each PSAP consolidation scenario, more detailed planning regarding facility space and location needs can be done.
- **Feasibility of Consolidation – Political/Policy Maker Input:** Overall there seems to be significant support for some form of consolidation. Survey responses showed a strong willingness at the leadership level to further consider consolidation of PSAP services, and also revealed that the physical location of the consolidated PSAP is not a significant factor in a decision to participate. Less than a third of respondents indicated that they were considering hosting the consolidated PSAP and the vast majority said that if financial and governance issues are acceptable they would participate no matter where the PSAP is located. Constituent approval was cited as a must by about 24% of respondents, but more than half said they would proceed if the consolidation makes fiscal and operational sense.

  The potential to improve PSAP service levels and efficiencies are clearly the most desired benefits of consolidation, followed by improvement of technology and PSAP capabilities. Reducing on-going operational costs and minimizing the required initial cost outlay to consolidate were also identified as important criteria in determining the success of the consolidated PSAP.

  An independently operated PSAP organized as a joint powers entity was the preference of over 64% of respondents, with 13% preferring a PSAP run by a single agency that serves other jurisdictions on a fee-for-service basis. Staff accommodation preferences were more evenly divided, with 44% favoring retention of all incumbent staff and 34%

favoring staffing the new PSAP as appropriate and letting each agency determine the disposition of current staff.

While the survey revealed clear preferences in many of the key consolidation topics, it also revealed strongly held opinions in dissent of the majority views. If the process is to move forward, it will be crucial to develop decision making processes that acknowledge all points of view and define the process for making higher level governance and policy decisions.

- **Feasibility of Consolidation – First responders Input:** As may be expected, there is much more reluctance to change from the first responder community. However, 45.9% of first responders indicated that their PSAP service is not multi-agency, in spite of the fact that all PSAPs in the study area are currently multi-agency. This may be due to the fact that most counties in the study area moved to county-wide dispatch services prior to the employment of most current responders. The application of some technology advancements (CAD, mobile data and records management software, 800MHz radio, AVL and in-vehicle/route guidance) are perceived by the majority to be "necessary" while some thought they were "nice to have". By far the biggest concerns focused on the potential of diminished service due to dispatchers' unfamiliarity with the service area and relationships. Nearly 4 out of 5 first responders indicated that the local knowledge of the service area and a working relationship with first responders was important for dispatchers. These respondents indicated that local knowledge and responder familiarity in the consolidated PSAP could be improved with technology such as mapping, AVL and CAD (63%), additional dispatcher and responder training (69%) increased staffing levels in the PSAP (65%) and other measures such as dispatch ride-alongs. There were also concerns related to staffing, overall level of service, training or lack thereof, accountability, chain of command to list a few. Even with this somewhat anti-consolidation sentiment, there is a thread that given the right transition process and addressing concerns that consolidation may indeed be workable.
- **Other Considerations:** Efforts are underway nationally and regionally to transition the existing 9-1-1 system from a telephone-based, voice only system to Next Generation 9-1-1 (NG-911), an Internet Protocol (IP) based system capable of communicating with a variety of devices and formats. Commonly cited examples are text messaging, photos, videos and telematic information such as real-time crash data from vehicles equipped with crash sensors. This change is being driven by rapidly evolving consumer expectations, the aging of the 9-1-1 infrastructure and the move towards communications based IP technology.

  NG-911 will provide quicker receipt of information in multiple formats, enable transfer of 911 calls with all associated data between PSAPs nationwide and increase the aggregation and sharing of data, resources, procedures and standards.

  The National Emergency Number Association (NENA) recently adopted the detailed technical specifications describing the network, components and interfaces required to establish NG-911 service. Implementation is expected to occur over several years and will not require the immediate replacement of the legacy systems in use throughout the region. Early cost estimates for NG-911 processing equipment at in the range of $75,000-100,000 per dispatch position.

NG-911 Data (voice and other forms) will be transported to the PSAPs on an Emergency Services Internet (ESI) line of service, which is a managed IP network used for emergency services communications shareable by all public safety agencies. ESInets will be privately managed and will normally be designed and built at a regional level. The Minnesota Department of Public Safety has completed two phases of their three phase plan to establish the statewide NG-911 backbone that local PSAPs will connect to in order to provide 911 services in the future.

NG-911 will bring with it profound changes in operational procedures, required dispatcher skill sets and technology management at the local level to assure that proper coordination occurs between the many applications and systems that will communicate across the system. Costs will be significant at the PSAP end, not only for the required capital investment, but also of support and management. Equipment upgrades, technology and human resource requirements may be beyond the ability of the small, local PSAP to support going forward.

3.0 Consolidation Models

In 2004 the Minnesota Department of Public Safety conducted a study of PSAP Consolidations in the State of Minnesota and created some best practices guidelines. Their report to the Legislature indentifies the following as potential PSAP Consolidation models for Greater Minnesota PSAPs.

In greater Minnesota, the models fall into three general categories:

- Intra-county consolidations typically involve the consolidation of two or more city PSAPs, the consolidation of city and county PSAPs, or a combination of the two. Counties typically provide dispatch services for all unincorporated areas within their boundaries and in most cases provide dispatch services for most, if not all, of the smaller towns and cities within their borders. It is also common for a county PSAP to provide dispatch services for larger communities within the county borders. For example, Winona County provides dispatch services for the City of Winona, as well as for all smaller communities within Winona County. In some cases the PSAP is owned and operated by a lead City within the county on behalf of both the City and the County. This is the case for the City of Rochester and Olmsted County. In this instance the City operates the PSAP on behalf of the all the municipalities in the county. In either instance, whether city or county run, there is sometimes – but not always – an agreement between the parties to share the operating costs of the PSAP. It is also most common that the municipalities are responsible for their own equipment costs, such as the purchase and repair of mobile radios. Intra-county consolidations are the most common form of consolidation in place in the State of Minnesota and have progressed about as far as they can go.
- Multi-county consolidations involve two or more county PSAPs joining together to create a single multi-county PSAP. There are only two examples of multi-county consolidations in Minnesota. The Rice-Steele County consolidation known as Pearl Street is a consolidation of Rice and Steele counties and all of the jurisdictions within the two counties. The other example is the Red River Dispatch Center, which is a consolidation of most of the PSAPs within the Fargo and Moorhead metropolitan area. These multicounty consolidations have been in place since 1999 and 2003 respectively. In both cases the PSAPs are governed by an independent governance body through a Joint Powers Agreement between the participating entities.
- Regional consolidation can include 911 call answering and dispatch functions for all public safety agencies within a defined geographical area into one agency. This type of consolidation usually provides services for all public safety call intake and dispatching within the assigned area. The consolidation creates one agency with a single point of governance. The agency can be an independent entity or a separate department within another agency such as a sheriff's office or a separate unit of county government. These agencies can operate out of a single or multiple physical locations. A full consolidation may also be a contractual relationship between neighboring public agencies and the PSAP agency. Regional consolidations do not exist in Minnesota, other than in the case of the dedicated State Patrol PSAPs (with 10 PSAPs for 11 regions).

In addition to these types of consolidation options, the PSAP Study Group also reviewed and discussed the potential for these additional consolidation options:

- Co-Location is the sharing of physical space by more than one PSAP and/or agency. In addition to sharing space, this may also include shared technology such as CAD,

telephone systems, radios and recorders while remaining completely separate entities. An example would be a communications center that houses a city police dispatch and a city fire dispatch where the employees are employed by their respective agency and governance remains with that agency. This model can provide cost efficiencies by sharing physical space and technology while allowing agencies to keep administrative control.

- Virtual Consolidation can include variations of what is listed above wherein a PSAP maintains separate physical locations but share common phone equipment, radio equipment, CAD and other public safety dispatching equipment over a secure managed network. Systems such as CAD and RMS can be accessed and operated remotely without loss of functionality and allow dispatchers to share information, make decisions, and deploy resources without the requirement to be physically present in the dispatch center. In addition, the remote operator virtually can see the same operator screens that one would see if they were sitting in the PSAP. Appropriate intergovernmental agreements can allow them to share the costs of new technologies and virtual backup capability for their 911 call intake and dispatch operations. An example of use of virtual dispatch services is Kandiyohi County and Big Stone County Minnesota. Big Stone County retained two of their 5 dispatchers to continue to provide administrative and some radio dispatch functions during day time hours. Kandiyohi County takes all Big Stone 911 calls and provides dispatching responsibilities 24 hours a day and also accepts roll over administrative call for after hours and night shift activity.

Each of these various consolidation alternatives was discussed by the Study Group and a determination was made to focus the attention of the business planning process an multi-county consolidation options. To further narrow the scope of the business planning task there was a need to identify which of the various consolidation alternatives should be studies in detail. The PSAP Study Group voted on the possible consolidation scenarios and the results are given in Table 1.

Table 1
PSAP Consolidation Options, Vote Results

SE MN PSAP Consolidation											
Number of Centers	**Dodge**	**Fillmore**	**Goodhue**	**Houston**	**Mower (not present)**	**Olmsted**	**Rice**	**Steele**	**Wabasha**	**Winona**	**Vote Totals**
Virtual		X	X	X					X		**4**
9											**0**
8											**0**
7											**0**
6											**0**
5											**0**
4	X			X			X	X			**4**
3	X	X	X			X	X	X	X	X	**8**
2	X	X	X	X		X	X	X		X	**8**
1						X			X	X	**3**

The results identified options for a 2-center, 3-Center, 4-Center, and Virtual Dispatch environment. The following Business Plan sections further explore each of the potential consolidation scenarios.

- **4-center Option.** Combine the current 10 centers into 4 centers within the region. The four centers may be configured based on available physical spaces, balancing call volumes, and existing shared technology systems. One possible scenario is to have a North, Central, South, and West configuration. See Section 5.0 and Map Figure 2.
- **3-center Option.** Combine the current 10 centers into 3 centers within the region. The three centers would likely be aligned based on common geographic and operational considerations such as the major transportation corridors that run through each county. One likely scenario is to create an I-35 Corridor Center, a Mississippi River - Hwy 61 Corridor Center, and a Central region - Hwy 52 / I-90 Corridor Center. See Section 6.0 and map Figure 5.
- **2-center Option.** Combine the current 10 centers into 2 centers within the region. It is anticipated that the two centers would strive to balance the call volumes, population and geography of the region. The centers would likely be linked and provide back-up between the two centers within the region. The potential exists that the two centers could share one governance structure and share some common administrative staff and functions such as Administration, IT, and Training. A North – South configuration is shown is Section 7.0, Map Figure 7.
- **Virtual Dispatch Configuration.** Retain the current 10 Center PSAP configuration in the region and create a Virtual Dispatch capability amongst those centers that chose to participate. This capability would allow for all 10 centers to be active during day shift and for one or more centers to be commissioned for night shift. The PSAP functions of inactive sites would be redirected within the region to neighboring centers to accommodate 24 hour service. This configuration does not have a full Business Plan scenario developed.

4.0 Goals/Objectives

The objective of restructuring the Southeast Minnesota PSAP configuration is to migrate from the current 10 centers to a configuration consisting of four, three, or two consolidated PSAP Centers. The new centers should be staffed at levels that will both provide operational efficiencies and improve the delivery of services to the public. Successful creation of the new centers will include the establishment of new governance and management practices for the customers served from these centers. The new PSAPs may require expansion and remodeling of physical space as well as a comprehensive technology planning and migration strategy.

This business plan is intended to provide the framework for the migration from providing service and operations from 10 PSAPs to a new PSAP configuration in the region. The establishment of objectives is the foundation of creating a successful business model. PSAP consolidation in most cases will result in reducing several centers down to one organization, in one facility, utilizing common systems and serving multiple response agencies and/or jurisdictions. It is important that throughout the detailed planning, design, governance establishment and stakeholders' engagement effort needed to create this new environment; that the early goals and objectives identified by the PSAP Study Group are addressed and used as guiding principles. Through project meeting discussions, survey methods and individual county interviews the following goals / objectives have been identified: (Listed with no priority or rank order)

1. Improved Service Levels:
    a. Reduction in the transfer of 9-1-1 calls between PSAPs, resulting in quicker call processing, dispatch and response times, as well as reducing the potential for dropped calls, information loss on transfer and confusion to the callers
    b. Transition to consistent service levels and Standard Operation Procedures (SOPs) across the region
    c. Improve the quality of service to the highest levels
    d. Through combining staff from multiple centers, create staffing and work load levels that eliminate current gaps for off-hours, or when employees call in sick, vacation, etc.
    e. Maintain community rapport and local personal touch (walk up window / interaction between dispatcher and officers). Public may need to be reeducated and be assured of a level of service.
    f. Some positions and functions that provide non-dispatch duties may not be suitable for transition to a consolidated PSAP.
    g. Address the concern of dispatcher "knowledge of the area" and geography particularly during the transition period.
    h. Provide capacity for special or emergency events, back-up capabilities, and redundancy / resiliency of the center
2. Cost Savings thru Economies of Scale:
    a. Coordinate support activities for PSAPs (training, public education, common CAD and RMS fields and processes, and Geographic Information System (GIS) standards)
    b. Implement standard technology platforms and shared infrastructure, uniform implementations and/or upgrades

c. Long-term cost efficiencies from eliminating duplication of expensive technology such as Computer Aided Dispatch (CAD), Record Management Systems (RMS), 9-1-1 answering equipment, radio consoles, logging recorders, etc.

d. Demonstrate the cost savings / benefits of consolidation as part of ongoing center annual performance reporting process which include standardized performance benchmarks.

e. Where possible leverage current technology investments through relocation and reuse of equipment that shares common platforms (ARMER, Consoles, CAD, E-911)

3. Improved Communications Interoperability:

   a. Improvement in the coordination of public safety agency activities and the effectiveness of inter-agency communications (Improved Communications Interoperability)

   b. Better records and information sharing between participating agencies.

   c. Enhanced resource management during large-scale incidents, natural disasters, and multi-jurisdiction/multi-agency and discipline incidents from a single point of control

4. Equity and Fairness in the Process and Outcomes

   a. Need strong leadership to assure all constituent groups are represented and included in process and decision making. CEO's of departments need to take lead.

   b. Governance structures and cost sharing formulas need to be fair and representative of levels of service, work load, and other factors like population served

   c. Consideration to employee transition is an important issue. Strive for equity when considering labor issues and dealing with differences in staffing practices (Issues such as compensation, seniority, relocations, etc.)

   d. The investment in initial capital and transition costs needs to be fair and needs to consider long term implications of late entrants or the potential for dissolution.

   e. Outreach and communication is critical, must trickle down.

5.0 Four Center Option

5.1 Geography and Alignment

The four center consolidation scenario proposes that the 11 southeast Minnesota counties would be organized into four regional dispatch centers. The selection of counties affiliated with each region is based on their geographic proximity, and a desire to balance the population distribution and call volume activity within the region. The new centers would include: a North Center with a consolidation of Goodhue, Wabasha, and Dodge Counties; a West Center with a consolidation of Rice, Steele, Freeborn, and Mower Counties; a Southeast Center including Fillmore, Houston, and Winona Counties; and a Central Center with Olmsted County remaining in its current configuration. The diagram in Figure 2 represents the four center geographic distribution scenario.

Figure 2 – Map of Four Center Option: Geographic

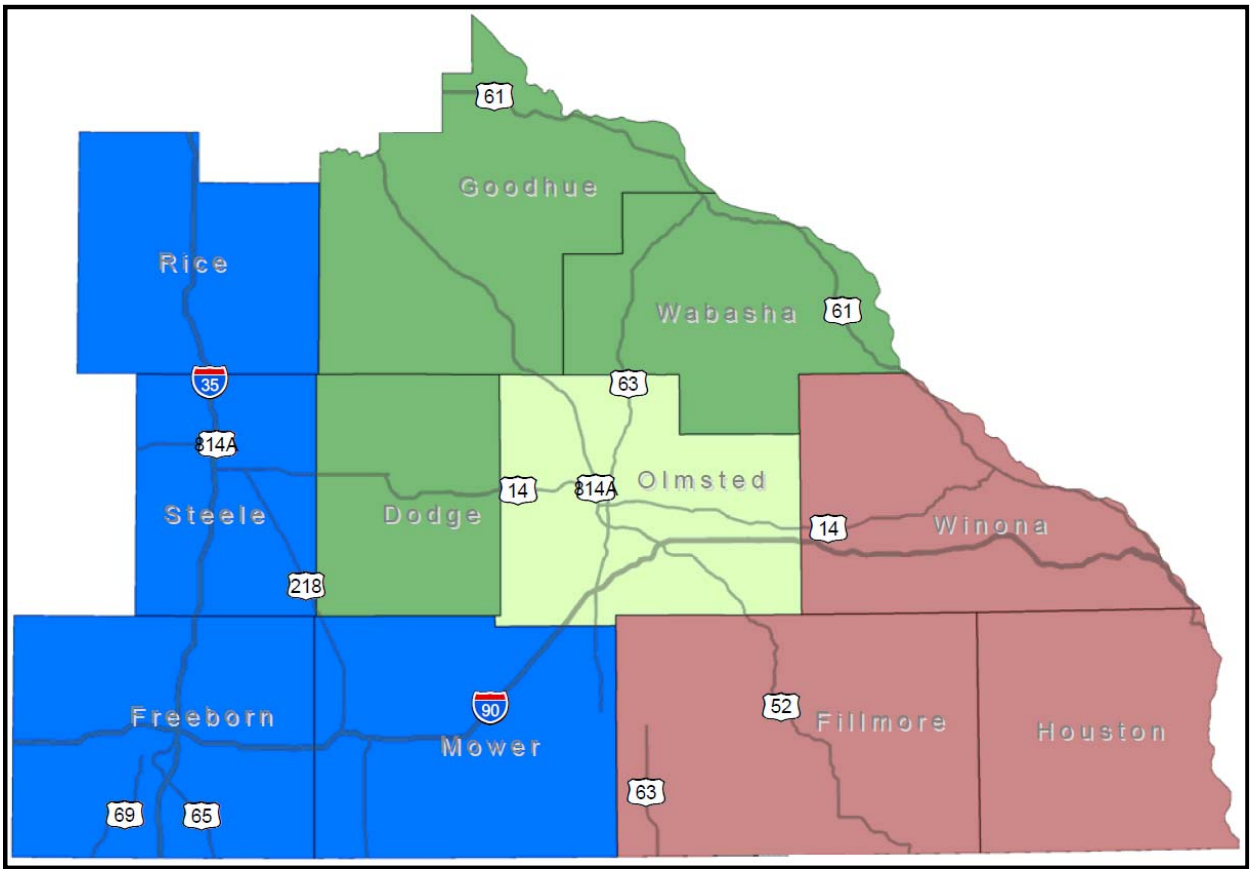


Table 2 reflects the current county populations, estimated total activity (911 and Admin calls, Radio Traffic volume, and CAD records created), and current center staffing levels. (NOTE: activity totals are subject to differing definitions and collection methods from jurisdiction to jurisdiction).

Table 2
Current PSAP Data; Four Center Option

4 Center Option: Geographic, North

County	Population	Total Activity	Staff
Goodhue	46,183	416,040	12.00
Wabasha	21,676	202,298	11.00
Dodge	20,087	164,785	9.20
Total	**87,946**	**783,123**	**32.20**

4 Center Option: Geographic, Central

County	Population	Total Activity	Staff
Olmsted	144,248	714,716	25.00

4 Center Option: Geographic, West

County	Population	Total Activity	Staff
Rice/**Steele**	100,718	622,729	21.00
Freeborn	31,255	110,997	10.00
Mower	39,163	476,479	10.75
Total	**171,136**	**1,210,205**	**41.75**

4 Center Option: Geographic, Southeast

County	Population	Total Activity	Staff
Fillmore	20,866	198,786	7.00
Houston County	19,027	160,023	9.00
Winona County	51,461	441,883	13.25
Total	**91,354**	**800,692**	**29.25**

5.2 Customers

The traditional customers served by the current 10 PSAPs will continue to be served from any restructured center configuration. One goal of this analysis is to determine to what extent, if any, the level of services to these customers can be at minimum maintained, and ideally improved thru the restructuring process. This business plan acknowledges that some services, although possible to provide remotely through the use of technology, would be provided with a higher level of service and more cost effectively if provided locally. Some of the services not proposed for inclusion in this consolidation plan are: walkup window customer service, after-hours facility access, monitoring building cameras, primary or backup jailer functions, business time administrative call activity, administrative typing and filing tasks, and other general clerical or support functions not considered traditional E-911 PSAP center core functions. This will introduce a change in the level of service provided in certain PSAPs, particularly for Houston, and Mower Counties. It is anticipated that agencies participating in a consolidated PSAP project will need to look at some level of work process re-engineering, to reassign or eliminate some non-dispatch tasks. One example of this may be to replace late night telephone answering services with voicemail systems. In other instances, some current staff positions will likely need to be retained at existing sites or some form of task and service re-engineering will be needed to accommodate those services not incorporated into a consolidated operation.

Table 3
Customer Alignment Tables - Four Center Option

4-Center Option, Geographic, North Center Customers

Agency	Law	Fire	EMS	Other
County				
Dodge	• Dodge Co. Sheriff • West Concord PD • Kasson PD • Mantorville PD • Dodge Center PD • Claremont PD • Hayfield PD	• West Concord FD • Kasson FD • Mantorville FD • Dodge Center FD • Claremont FD • Hayfield FD • Blooming Prairie FD • Pine Island	• Mantorville FD • Dodge Center FD • Clarmont FD • Dodge Center Ambulance • Hayfield Ambulance, • West Concord Ambulance • Blooming Prairie Ambulance	• Public Health • Probations • Emergency Management • Window walkups • Assist & communicate w/State Patrol, Mayo One, Public Works, & DNR. • Have contact with Highway Departments.
Goodhue	• Red Wing PD • Cannon Falls PD • Zumbrota PD • Goodhue PD • Kenyon PD • Prairie Island Tribal PD	• Red Wing FD • Zumbrota • Pine Island FD • Goodhue FD • Cannon Falls FD	• Red Wing • Zumbrota • Cannon Falls • Kenyon (dispatch by Goodhue)	• Meisville (paged by Dakota Co.) • Randolph Fire (Dakota Co.) • North Field Fire (Dispatched by Rice Co.) • Mazeppa Fire (Wabasha Co.) • West Concord
Wabasha	• Wabasha Co. Sheriff • Wabasha PD • Lake City PD • Plane View PD • Kellogg PD • Contract with Mazeppa & Elgin PDs	• Lake City FD • Zumbro Falls FD • Elgin FD • Kellogg FD • Mazeppa FD • Plainview FD • Wabasha FD	• Zumbro Falls First Responders • Mazeppa First Responders • Kellogg First Responders • Lake City Ambulance • Kellogg Ambulance • Plane View Ambulance	• Public Utilities (Excel, City Water) • DNR & State Patrol • Parks • Jail (transports, schedule/trip plan, Jail visitation, video visitation)

4-Center Option, Geographic, Southeast Center Customers

Agency	Law	Fire	EMS	Other
County				
Fillmore	• Fillmore County Sheriff • Preston PD • Chatfield PD • Rushford PD • Fountain PD • Ostrander PD	• Canton FD • Chatfield FD • Fountain FD • Harmony FD • Lanesboro FD • Mabel FD • Ostrander FD • Preston FD • Rushford FD • Spring Valley FD • Wykoff FD	• Spring Valley Ambulance • Chatfield Ambulance • Preston Ambulance • Lanesboro Ambulance • Harmony Ambulance • Mabel Ambulance • Rushford Ambulance • Wykoff First Responders • Ostrander First Responders • *Gold Cross Ambulance • *Tri-State Ambulance • *Leroy Ambulance • *Mayo 1 helicopter • **(* Out of County)**	• Have contact with Highway Department • Jail services • Window contact for customers • Sports contract • Transcriptions/Radio, DVD/tapes of DWI arrests for courts • siren activation (not all communities) for Preston, Canton, Peterson, & Waylen • Enter warrants from the courts • Enter all ICR (CJIS) • Some state patrol dispatching • Page for anyone in the 867 prefix.

Agency	Law	Fire	EMS	Other
County				
Houston	• Houston County Sheriff • La Crescent PD • Hokkah PD • Houston PD • Caledonia PD • Spring Grove PD	• La Crescent FD • Hokkah FD • Houston FD • Caledonia FD • Spring Grove FD • Eitzen FD • Brownsville FD	• Houston • Caledonia • Spring Grove • New Albin Fire & Ambulance	• Backup jailer for the entire jail • Genoa Nuclear plant (decommissioned) code red • Siren activations • One court security • Courts logistics • Reverse 911 • Dispatcher controls elevator, sally ports, doors, etc. • Communication with Highway Dept (won't dispatch) & Environmental Services
Winona	• Winona County Sheriff • Winona PD • Goodview PD • Lewiston PD • St. Charles PD	• Winona FD • Goodview FD • Minnesota City FD • Rolling Stone FD • Lewiston FD • St. Charles FD • Wilson FD • Ridgeway FD • Nodine FD • Pickwick FD • La Crescent FD • Attura FD • Dakota FD • Hidden Valley FD • Plainview FD	• Stockton & Elba Ambulance • Winona • Altura • Lewiston • St. Charles • Tristate • Rushford, • Plainview (fire and ambulance) • Air EMS - Medlink & Mayo	• County Admin • Winona County Highway Department • Us Fish & Wildlife • Court Security • Winona City Courts, • Jail Control Point (doors), monitor facilities

4-Center Option, Geographic, Southwest Center Customers

Agency	Law	Fire	EMS	Other
County				
Freeborn	• Freeborn County Sheriff • Alden PD • Albert Lea PD • Freeborn Co Jail Transport • DNR & State Patrol	• City of Albert Lea FD • Albert Lea Township FD • Alden FD • Clarks Grove FD • Conger FD • Emmons FD • Freeborn FD • Geneva FD • Hartland FD • Hayward FD • Hollandale FD • London FD • Manchester FD • Myrtle FD • Twin Lakes FD	• Mayo Clinic Health Systems • Albert Lea • Freeborn • New Richland • Gold Cross Ambulance, • Blooming Prairie • Lake Mills (Iowa)	• Public Health • Environment Services • County Highway • City Public Works • Emergency Management • Walk up window • Video visitation

Agency	Law	Fire	EMS	Other
County				
Mower	• Mower County Sheriff • Austin PD • City of Adams PD • Browns Dale PD • Lyle/Mapleview PD • Grand Meadow PD • Contract services for Leroy	• Maple view FD • Browns Dale FD • Grand Meadow FD • Leroy FD • Adams FD • Lyle FD • Austin FD • Dexter FD	• Adams • Leroy • Grand Meadow • Austin (Gold Cross)	• County & City Attorneys • Human Services • Back ground checks for City of Austin & Housing & Redevelopment • Posse • Police Reserves (shared) • DNR & State Patrol • Community Service Officers, includes animal calls • Military & Volunteer background checks • Finger prints • Jobs for schooling & adoptions • Admin support
Rice/Steele	• Rice County Sheriff • Steele County Sheriff • Faribault PD • Northfield PD • Lonsdale PD • Dundas PD • Morristown PD • Owatonna PD • Blooming Prairie PD	•Faribault Fire •Northfield Fire •Lonsdale Fire •Morristown Fire •Nerstrand Fire •Owatonna Fire •Medford Fire •Ellendale Fire •Blooming Prairie Fire	•Transfer to North Ambulance •Transfer to Gold Cross •Transfer to Allina Ambulance •Page Ellendale Ambulance •Page Blooming Prairie Ambulance	• Call out for tow trucks • Page weather spotters • Auto dial (code red) notification to residents for any warnings.

4-Center Option, Geographic, Olmsted County Customers

Agency	Law	Fire	EMS	Other
County				
Olmsted	• Olmsted County Sheriff • Rochester PD Outside county: • Chatfield to Fillmore • Goodhue to Pine Island.	• Byron FD • Stewartville FD • Rochester FD • Hayfield FD • Chatfield FD • Elgin FD • St. Charles FD • Zumbro Falls FD • Pine Island FD • Oronoco FD • Dover FD • Eiota FD	• Chatfield • Eiota • Elgin • St. Charles • Gold Cross • Pine Island • Stewartville • Byron	• Page County Coroner • Court Security • Warrant Confirmation • Security camera at front door • Direct line ring down from all 5 fire stations, IBM, Airport, & Public Utilities

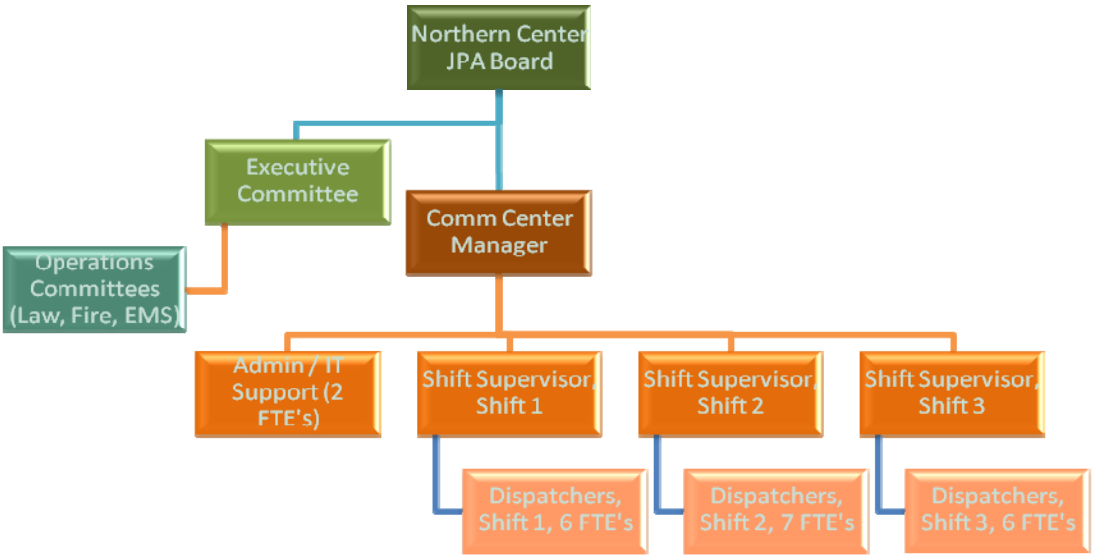
5.3 Management and Organization

The restructuring of the current PSAPs to create a four center model will change the proximity, availability and relationship between the communications personnel and the current Sheriff's offices, local police departments, and to some extent fire and EMS Service personnel. Depending on the final locations of the new centers there will be certain

customers that no longer house a communication center. Accountability of the communications center organization structure is an important consideration to the creation of the new model of providing dispatch services for the region. To help assure that all counties involved in a dispatch consolidation receive a comparable level of services there are advantages to having the centers report through a new management level position to a new joint powers board structure created by the adoption of a Joint Powers Agreement (JPA). The JPA membership should be representative of all participants in the PSAP. Section 8 of this report discusses Governance Structure options in more detail. For the four center consolidation scenario, more so than for the 3 or 2-center models, the option of a host agency – fee- for-services model is also an appropriate means of managing the new centers. The organization chart shown in Figure 3 reflects the JPA model of governance. Regardless of the governance model chosen in the 4-center consolidation option, it is recommended to include a dedicated Communications Center Manager and additional Shift Supervisor positions. The advantages of this new management structure include:

- Increases potential to establish uniform work processes within the PSAP and within the region.
- Creates a more even distribution of work load within the PSAPs.
- Concentrates work force to provide support (dispatchers can assist each other when they are all located in one location).
- Limits potential for differing levels of service based on county relationship and physical proximity.
- More focused accountability for communications function.

Figure 3 – Sample Organization Chart, Four Center Option



Within each of the new centers the proposed staffing plan will include a Communication Center Manager that will report to the JPA Board. The Communication Center Manager will be responsible for all aspects of the PSAPs operations, staffing, and delivery of services. The plan provides for three Radio Communication Supervisor positions and 19 Radio Communication Operators. Because of the autonomous nature of a stand-alone PSAP that is

not able to rely on a host agency for typical overhead support services in house, this plan proposes the addition of one administrative support staff position and one information technology staff position for each center. Other support services, such as legal, fiscal and human resources would most likely be received through contractual arrangements from a participating member or private entity. The staffing level recommended for the 4-center PSAP consolidation is shown in the Table 5.

The staff levels were determined using a traditional approach to building a staffing estimate for a consolidated center that projects staff need based on current center work load (measured volume or calls, dispatches, and records created) known as the Erlang C staffing model. The Erlang C is a traffic modeling formula used in call center scheduling to calculate delays or predict waiting times for callers. Erlang C also calculates the resources that will be needed to keep wait times within the call center's target limits. The Erlang C traffic model estimates how many dispatchers are needed in a call center.

These computational recommendations were then compared against real world data to determine if the recommendation is appropriate. A comparison was made against four known call centers with similar characteristics. Two different metrics were used for the comparison; total population serviced and total annual call volume processed. Research was done to collect data from 12 different active dispatch centers ranging in size, population, and activity level. The complete PSAP Benchmark Comparison Table is included in Appendix A. The comparisons offered a checks and balance approach to the calculation methods, and some reassurance of accuracy for the proposed staff level recommendations. Table 4 provides baseline call volume and staffing data provided by each of the 10 PSAPs in the region. The tables also project staffing estimates for dispatcher staff levels to accommodate the aggregate call volumes for potential future PSAP configurations and the comparison to existing centers with staff counts for these actual operational centers.

Table 4
Staffing Benchmark Comparison Tables - Four Center Option

4 Center, Geographic					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
North	87946	214985	32.2	25.2	Bloomington	85238		16	29.25	
					Carver Co.	91042		17		
					Outagamie Co., WI		213771	33		
					Waukesha Co, WI		216696	51		

(North = consolidation of Dodge, Goodhue & Wabasha Counties)

4 Center, Geographic					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
Central (Olmsted)	144248	205717	25	25.2	Scott Co.	130000		20	31	
					Winnebago Co.	166994		33		
					Washington Co.		213771	20		
					Waukesha Co, WI		216696	51		

Table 4 (Continued)
Staffing Benchmark Comparison Tables - Four Center Option

4 Center, Geographic					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
West	171136	325112	41.75	36.8	Winnebago Co.	166994		33	44.25	Southwest PSAP Staff of 36.8 may be low depending on call detail.
					Outagamie Co. (WI)	176695		36		
					Anoka		307700	42		
					DCC		300451	66		

(Southwest = consolidation of Freeborn, Mower & Rice/Steele Counties)

4 Center, Geographic					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
Southeast	91354	251925	29.25	25.2	Bloomington	85238		16	29.25	Southeast PSAP Staff of 25.2 may be low estimate of required staff.
					Carver Co.	91042		17		
					St. Louis Co		248594	47		
					Red River		238974	37		

(Southeast = consolidation of Fillmore, Houston & Winona Counties)

The number of employees available to staff a center, the number of dispatch positions actively staffed at any one time, the number of supervisory staff, and the availability of staff to support unexpected events all play a role in the level of service provided by a center. Events such as disasters and large emergencies require a larger pool of staff to sustain PSAP operations through a major emergency crisis. It is also important to adequately staff the centers because when individuals call in sick, take extended leaves, or require training impacts the ability of a center to provide a high level of service. Staffing levels and staff performance will impact levels of service during the restructuring transition and the ongoing levels of service provided from each current PSAP. Staffing considerations will also have a significant impact on the cost of the restructuring effort.

Table 5 summarizes the four consolidated PSAPs showing the recommended staffing models for each PSAP. The Erlang C modeling used to prepare these calculations includes the following information based on the 2010 calendar year:

- Actual 2010 Total Calls (incoming 911 and admin)
- Estimated Radio Traffic
- Estimated CAD Records

Assumptions:

- Average work week = 35.5 hours, average work year = 1,846 hours.
- In four center scenario PSAP manager assumed to perform floor supervision duties
- 8,760 staff hours required to fill one position 24 hours a day, 365 days per year
- Minimum of three dispatchers on Duty at all times (17,520 staff hours)
- 2,920 staff hours required to fill one position 8 hours a day, 365 days per year

Table 5
Proposed Staffing Model, 4-Center Option

								Dispatch Shift Allocation				On-Duty Dispatch Avg.		Average Supervisory daily coverage(hours)
Four Center Model	Total FTEs:	Manager	Admin	I/T	Superv.	Dispatchers		Shift 1	Shift 2	Shift 3				
North	25	1	1	1	3	19		6	7	6		4.0		20
Southeast	25	1	1	1	3	19		6	7	6		4.0		20
Central	25	1	1	1	3	19		6	7	6		4.0		20
West	37	1	1	1	4	30		10	10	10		6.3		25
Totals:	**112**	**4**	**4**	**4**	**13**	**87**		**28**	**31**	**28**				
Northern: Dodge, Goodhue & Wabasha Counties. Southeast: Fillmore, Houston & Winona Counties Southwest: Freeborn, Mower & Rice/Steele Counties. Central: No change, stand alone County (Olmsted)														

This plan proposes that existing personnel in the current PSAPs will be encouraged to relocate to the new consolidated centers. The dispatchers from each represented county would come with different starting salaries and benefits. The cost estimates in this plan allow for Average Salary levels based on the highest average from the perspective joining centers. Governance and transition planning will need to establish baseline benefits such as base salary range, benefits, seniority and any other related issues. Even if employment at the newly created PSAP will represent a new employment relationship, consideration will need to be given to establishing a relationship between tenure and compensation and benefits for transitioning staff. The goals established by the PSAP Study Group called for policies that provide, at a minimum, parity, as well as an improved opportunity for employment as to what exists for the current PSAPs for each participating county. For staff that chose not to relocate to the new consolidated center, the participating agency PSAP will use existing contract allowances such as encouraging severance and retraining benefits.

5.4 Product and Service Description

All four PSAPs in this scenario will operate 24 hour per day, 365 days per year. The services provided by the four centers will replicate as much as practical the services currently provided from the 10 current PSAPs in the region. There may be some administrative telephone calls and peripheral agency specific administrative work that the current PSAPs perform that is not done from the new consolidated centers.

The primary services provided from the 4-center PSAP configuration will include:

- E-911 call taking / call transfers
- After hours agency specific administrative phone line call taking *
- Emergency responder radio dispatching (police, fire, EMS)
- Notification of other emergency responders not dispatched by PSAP. (private ambulance, mutual aid agencies)
- Monitoring of radio traffic / coordination of field personnel
- Creation and updating of CAD system records
- Roll over telephone support for local PD and Fire stations for after hours calls

- Reverse E-911 public notification
- Warning siren activations
- Retrieval of logged audio records for courts
- Monitoring of building alarms
- Monitoring of security cameras
- Participate in agency policy and process decision making
- Provide information to local businesses (Call Tree / Key holder)
- Requesting Tow services
- Coordination with impound lot
- Coordination with local EOCs and emergency management
- Systems alarm monitoring (ARMER)

A listing of services provided by the current centers that would not be included in the consolidated PSAP includes:

- Standard business hours administrative call taking*
- Customer window information requests
- Back up support for jail operations
- After hours building access or facility monitoring

The services provided by the PSAP should be well defined and documented in Customer Service Level Agreements that accompany any contract or Joint Powers governance model. The * listed above references that administrative calls currently make up a significant percentage of call volume and activity for the individual PSAPs. The staffing levels determined by the Erlang C model and the subsequent comparisons with real world PSAPs suggest that a determination of how administrative call traffic is supported in a consolidated environment will have a bearing on staffing requirements and may alter the staff levels reflected in this Business Plan.

5.5 Technology Considerations

The migration from 10 PSAPs in the Southeast Minnesota region to four consolidated PSAPs will require a capital investment in technology upgrades, relocation, and integration. Attention to technology requirements and establishment of a goal of uniformity and compatibility of technologies used within the geographic jurisdiction of each of the four centers is important. This plan strives to assure the new centers operate effectively, adequately support the demands of consolidated operations, meet industry standards and best practices, and prepare for the necessary expansion of systems and technologies.

There will continue to be some variation in the technologies deployed among the four PSAPs based on the unique nature of the counties they currently serve and the differing system elements that have been deployed in different PSAPs throughout the southeast region. The primary systems considered for migration to the new 4-center configuration include:

- Next Generation E-911 telephone system.
- Multiple position radio dispatch workstation with multiple channels and multiple speaker configurations. (number of positions is dependent on staff levels and is identified in Section 6.6 - Facilities/Physical Space)

- A uniform computer aided dispatch system and records management system (CAD / RMS) connected to multiple remote users
- Monitors, displays, and servers
- 911 and radio call recording systems
- Supporting mobile data infrastructure
- Supporting radio system infrastructure (ARMER, Legacy VHF, Legacy Paging)
- Local Video Security Systems

The new consolidated PSAP Centers will require the standardization of CAD systems and need to choose a single system for each center. The counties in the Northern Center all have CIS for their CAD systems which can be fiscally advantageous and from a personnel comfort level perspective. However, the system would need to be evaluated and upgraded to ensure that it has the functionality necessary for a larger consolidated PSAP.

The spreadsheet in Table 6 shows current CAD features used by each county and what would be required in a consolidated PSAP.

Table 6 also provides a template for the technology elements being planned for deployment at the PSAPs. This template may be used during the technology and migration planning for this project. The template may also be useful through deployment and cutover phases of the project as a check list to verify each technology element as it is deployed, tested and accepted for final operation

Table 6
Current CAD Systems and Options Comparison Tables, Four Center Option

4 Center Option: Geographic, Northern PSAP, Current CAD Systems

CAD	Dodge (CIS)	Goodhue (CIS)	Wabasha (CIS)	Consolidate PSAP Required CAD Features
911 ANI/ALI Interface	YES	YES	YES	Required
State/NCIC Interface	YES	YES	YES	Required
Other Interfaces (MDC)	YES, GIS Mapping	YES	NO, MDC	Required
Alphanumeric Paging	YES, VHF	NO, Not via CAD	NO, Consoles	Required
Automatic Vehicle Location	NO	YES	NO	Required
Emergency Medical Dispatch	NO	NO	NO	Not Required
Fire Mobile Data	NO , Can Fax map, quick send	NO	NO	Not Required
Fire Station Alerting	NO	NO	NO, VHF paging, agency incident log	Not Required
Fire/EMS Records Management	Not Used	YES, Track basic ICR	YES, ICR	Required
Mobile Mapping	NO	YES	YES	Required
Police Mobile Data	YES, Air card	YES	NO	Required

Table 6 (Continued)
4 Center Option: Geographic, Southwest PSAP, Current CAD Systems

CAD	Freeborn (CIS)	Mower (Positron Intrado)	Rice/Steele (LOGIS)	Consolidate PSAP Required CAD Features
Police Field Reporting	YES, From computer in squad car	YES, Use CIS via Citrix	YES, Partial, word processing only	Required
Police Records Management	YES	YES	YES	Required
Radio Console/System – Push-to-Talk/Emergency	NO	Yes	NO	Required
Rip & Run	NO	NO, Have capability, not used	NO	Not Required
TDD/TTY	NO	NO, Not in CAD (it's on the phone)	YES	Required
911 ANI/ALI Interface	YES	YES	YES	Required
State/NCIC Interface	YES	YES	YES	Required
Other Interfaces (MDC)	YES	YES, Portal Records Access	NO, RMS is shared among LOGIS subscribers.	Required
Alphanumeric Paging	NO	YES, Radio Console	YES, Separate from CAD	Required
Automatic Vehicle Location	YES - Albert Lea Only	YES	YES	Required
Emergency Medical Dispatch	NO	NO	NO	Not Required
Fire Mobile Data	NO	NO	NO	Not Required
Fire Station Alerting	YES	NO	NO	Required
Fire/EMS Records Management	NO	YES	YES	Required
Mobile Mapping	YES	YES	YES	Required
Police Mobile Data	YES	YES	YES	Required
Police Field Reporting	YES	YES	YES	Required
Police Records Management	YES	YES	YES	Required
Radio Console/System – Push-to-Talk/Emergency	YES	YES	NO	Required
Rip & Run	NO	NO	YES	Required
TDD/TTY	YES	YES	YES	Required

Table 6 (Continued)

4 Center Option: Geographic, Southeast PSAP, Current CAD Systems

CAD	Fillmore (TAC 10)	Houston (No CAD *)	Winona (CIS)	Consolidate PSAP Required CAD Features
911 ANI/ALI Interface	N/A	N/A	YES	Required
State/NCIC Interface	N/A	N/A	YES	Required
Other Interfaces (MDC)	N/A	N/A	NO	Not Required
Alphanumeric Paging	N/A	N/A	YES	Required
Automatic Vehicle Location	N/A	N/A	NO	Not Required
Emergency Medical Dispatch	N/A	N/A	NO	Not Required
Fire Mobile Data	N/A	N/A	NO	Not Required
Fire Station Alerting	N/A	N/A	NO	Not Required
Fire/EMS Records Management	N/A	N/A	YES	Required
Mobile Mapping	N/A	N/A	YES	Required
Police Mobile Data	N/A	N/A	YES	Required
Police Field Reporting	N/A	N/A	YES	Required
Police Records Management	N/A	N/A	YES	Required
Radio Console/System – Push-to-Talk/Emergency	N/A	N/A	NO	Not Required
Rip & Run	N/A	N/A	YES	Required
TDD/TTY	N/A	N/A	NO	Not Required

* Houston County does not use CAD but has RMS Police Central for ICR and jail information.

The new designated PSAP centers will have to obtain several files including, but not limited to, GeoFiles, Master Name Files, Incident History Files and others, from the counties that will be consolidated. For counties like those in the Northern Center that have the same CAD software, this is as simple as updating the file with the area to be dispatched and does not involve file conversions. It most likely will involve data entry work on the consolidated PSAP's CAD program.

For the consolidated counties that have different software (as in the Southwest Center), a standardized CAD program will need to be chosen and file conversions done to get the data into the consolidated PSAP's CAD system. Selection of a CAD system that already exists for one of the counties existing PSAP facilities will reduce file conversion costs.

Dispatcher Radio Console systems are used to communicate with field personnel and other agencies. In many PSAP Centers, the radio console system interfaces with the CAD system to provide the dispatcher with the identification of radios/units calling to enhance communications. The consolidated PSAP will most likely be part of the Minnesota State ARMER system. Currently only two (2) types of radio consoles have been approved for peer level connection to the ARMER system backbone, the Motorola Gold-Elite and the MCC 7500. Motorola announced the intent to cancel the Gold-Elite consoles with the last order date of September 30th, 2011 and the last ship date of December 31st, 2011. Table 7 shows the type of console systems each county currently has in there dispatch centers. Freeborn, Houston, Rice/Steele, Wabasha and Winona have all upgraded or are in the process of

upgrading to the MCC 7500 Console. Dodge, Fillmore and Goodhue are currently using the Motorola Gold Elite. Mower has an Orbicom Console and is the only Southeast County using a non-Motorola console. Mower is also the only county in the southeast not on the ARMER system.

Table 7
Current Dispatch Console Systems Comparison, Four Center Option

4 Center Option: Geographic, North PSAP, Current Radio Console System			
County	Dodge	Goodhue	Wabasha
Radio Console	Motorola Gold Elite	Motorola MCC 7500	Motorola MCC 7500
4 Center Option: Geographic, West PSAP, Current Radio Console System			
County	Freeborn	Mower	Rice/Steele
Radio Console	Zetron, MCC 7500 to be installed	Orbicom	Motorola MCC 7500
4 Center Option: Geographic, Southeast PSAP, Current Radio Console System			
County	Fillmore	Houston	Winona
Radio Console	Motorola Gold Elite	Motorola MCC 7500	Motorola MCC 7500

5.6 Facilities / Physical Space

The primary criteria that drive space requirements include: the number, sized and proximity of PSAP workstations; associated staffing considerations such as lockers, break room and conference rooms; electronic equipment and back up capability spaces; and future expansion needs. Other primary considerations for the facility include its geographic location and proximity within the region served; the capacity, robustness, and resiliency of building electrical, mechanical, and communication systems; physical security of the center, and the potential for related uses such as regional Emergency Operations Centers or regional training facilities.

Creation of the four consolidated PSAPs will provide the opportunity to create new work spaces for all of those sites except for the Central Olmsted County Center. None of the current centers has expansion space in on their current dispatch floor to accommodate the number of staff or associated work stations in their current centers without some level of remodeling or expansion of current facility. There are, however, several opportunities to create adequate space by expanding within several of the existing centers, occupying adjacent spaces and upgrading to accommodate the additional staff and work stations required by the new 4-center PSAP configuration.

PSAP facilities are staffed 24/7 to provide continuous public access to the agencies. Physically consolidated PSAPs will require new or modified PSAP facilities. Table 8 summarizes facilities requirements for each consolidated PSAP in the 4-center option. The square footage is driven by the number of call-taker and dispatcher positions that were developed using the Erlang C model based on workload information provided by the existing PSAPs.

Table 8
Facility Space Requirements Recommendation, Four Center Option

	Work Stations *	Executive Directors Office	Comm Center Managers Office	Dispatch Supervisors Office	Break Room/Kitchen	Conference Room	Admin Office/Copy and File Room	Equipment Room*	Equipment Repair and Maintenance Room	Locker Room	Bath Rooms and Showers	Public Bath Rooms	PSAP Sq Ft Sub Total	Building Circulation 15%	Building Services 10%	Gross Building Square Feet
4 Centers																
North																
Quantity	10	0	1	1	1	1	1	20	1	1	2					
Size (sq ft)	150	0	150	150	300	300	150	25	250	400	200					
Total:	1500	0	150	150	300	300	150	500	250	400	400	0	**4100**	615	410	**5125**
Southeast																
Quantity	10	0	1	1	1	1	1	20	1	1	2					
Size (sq ft)	150	0	150	150	300	300	150	25	250	400	200					
Total:	1500	0	150	150	300	300	150	500	250	400	400	0	**4100**	615	410	**5125**
Central																
Quantity	10	0	1	1	1	1	1	20	1	1	2					
Size (sq ft)	150	0	150	150	300	300	150	25	250	400	200					
Total:	1500	0	150	150	300	300	150	500	250	400	400	0	**4100**	615	410	**5125**
West																
Quantity	14	0	1	1	1	1	1	20	1	1	2					
Size (sq ft)	150	0	150	150	300	300	150	25	250	400	200					
Total:	2100	0	150	150	300	300	150	500	250	400	400	0	**4700**	705	470	**5875**

* Assumptions:
- Operations floor square footage calculated at 150 sq ft per work station.
- Equipment Room calculated at an average of 25 sq ft per rack.

The sites that offer possible space for expansion of existing space to accommodate one of the consolidated PSAPs include;

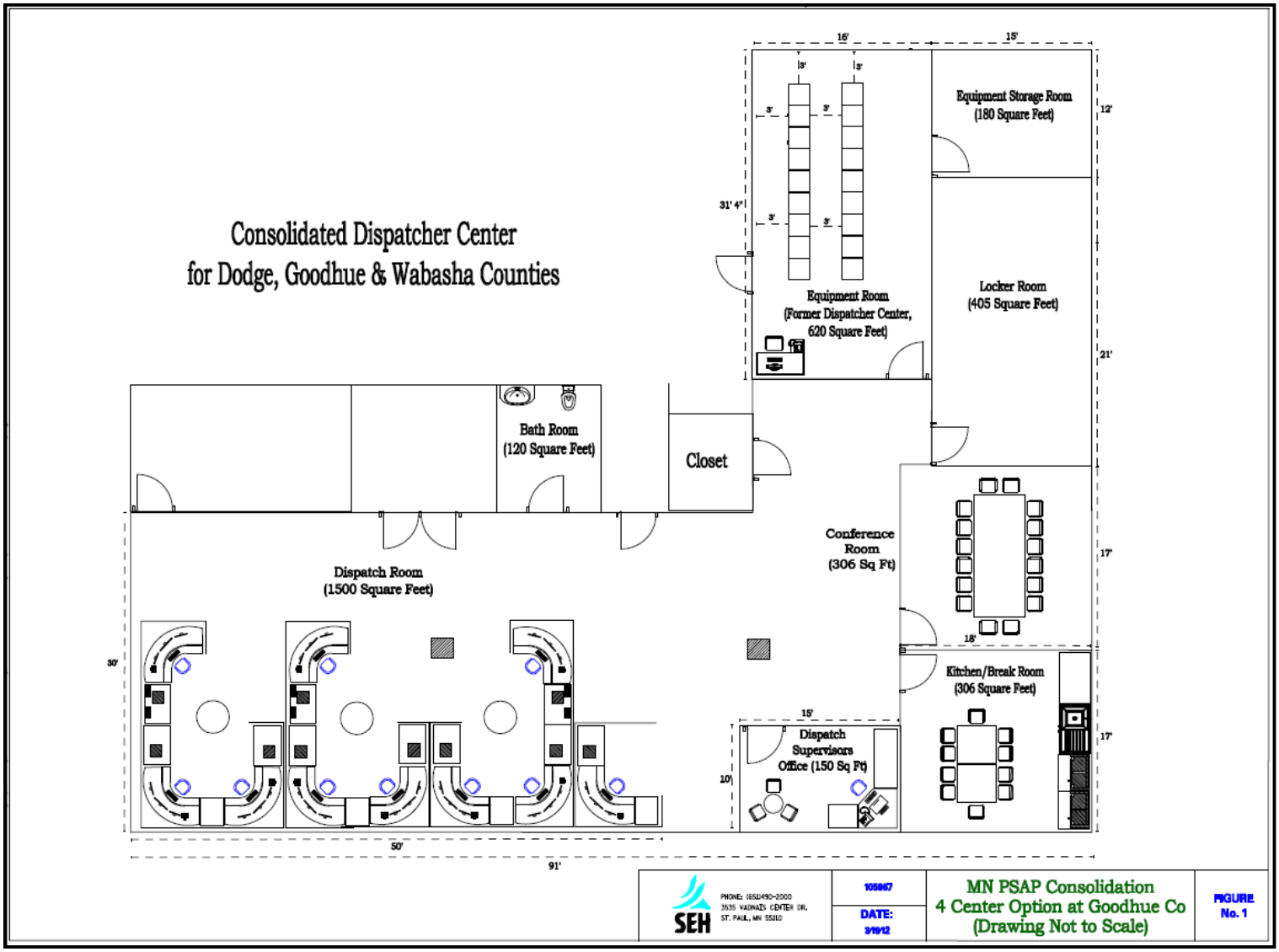
(NOTE: For discussion)

- Goodhue County; expand the current PSAP into the adjacent EOC/ Conference room space. (3545 Sq feet available for expansion)
- Wabasha County, expand the current PSAP into adjacent storage and clerical space (2010 Sq feet available for expansion)
- Pearl Street - Rice/Steele County, relocate PSAP and expand into facility lower level conference room, office and locker room space. (4035 Sq feet available for expansion)

- Freeborn County; expand current PSAP into adjacent records / finance office space. (1911 Sq feet available for expansion)

One proposed PSAP layout configuration is shown in the following diagram.

Figure 4 – Sample Consolidated PSAP Layout, Four Center Option



5.7 Four Center PSAP Consolidation Migration and Operational Cost Estimate

The migration from 10 centers to a new configuration of four consolidated PSAP dispatch centers will require an initial investment in facilities remodeling and expansion, staffing relocation, and new technology implementation. The operation of the four centers will also have continuing operating costs. The estimated project costs listed below are derived from several sources including 2010 SE MN PSAP operating budget figures, and SEH estimated technology system and hardware costs.

AWT
04/26/12

Table 9
MN Southeast PSAP Consolidation Project, PSAP Cost Comparison Options
4-Center Option: Geographic

North Center

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) {.5*1/3+.25*Pop+ .25*Vol}
Goodhue County	46,183	52.5%	416,040	53.1%	12.00	$760,567	$63,381	$897,699					$976,455	$987,851	$800,986
Wabasha County	21,676	24.6%	202,298	25.8%	11.00	$675,621	$61,420	$722,608					$458,299	$480,339	$544,569
Dodge County	20,087	22.8%	164,785	21.0%	9.20	$448,008	$48,697	$493,008					$424,703	$391,268	$513,902
Total	**87,946**	**100.0%**	**783,123**	**100.0%**	**32.20**	**$1,884,196**	**$57,832**	**$2,113,315**	**25**	**$1,584,515**	**$274,943**	**$1,859,457**	**$1,859,457**	**$1,859,457**	**$1,859,457**

Olmsted County

County	Population		Total Activity	Activity %	Staff										
Olmsted County	**144,248**		**714,716**		**25.00**	**$1,918,485**	**$76,739**	**$2,105,006**	**25**	**$1,918,485**	**$186,521**	**$2,105,006**	**$2,105,006**	**$2,105,006**	**$2,105,006**

Southwest Center

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) {.5*1/3+.25*Pop+ .25*Vol}
Rice/Steele County	100,718	58.9%	622,729	51.5%	21.00	$1,377,889	$65,614	$1,829,732					$2,016,244	$1,762,859	$1,515,762
Freeborn County	31,255	18.3%	110,997	9.2%	10.00	$422,220	$42,222	$710,738					$625,685	$314,217	$805,962
Mower Count	39,163	22.9%	476,479	39.4%	10.75	$649,749	$60,442	$741,231					$783,992	$1,348,845	$1,104,196
Total	**171,136**	**100.0%**	**1,210,205**	**100.0%**	**41.75**	**$2,449,858**	**$56,093**	**$3,281,701**	**37**	**$2,427,709**	**$998,212**	**$3,425,921**	**$3,425,921**	**$3,425,921**	**$3,425,921**

Southeast Center

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) {.5*1/3+.25*Pop+ .25*Vol}
Fillmore County	20,866	22.8%	198,786	24.8%	7.00	$350,000	$50,000	$378,000					$378,567	$411,482	$473,748
Houston County	19,027	20.8%	160,023	20.0%	9.00	$494,514	$54,946	$522,314					$345,202	$331,244	$445,347
Winona County	51,461	56.3%	441,883	55.2%	13.25	$804,594	$60,724	$864,886					$933,644	$914,687	$738,318
Total	**91,354**	**100.0%**	**800,692**	**100.0%**	**29.25**	**$1,649,108**	**$55,223**	**$1,765,200**	**25**	**$1,518,102**	**$139,310**	**$1,657,412**	**$1,657,412**	**$1,657,412**	**$1,657,412**
										$7,448,811	$1,598,986	$9,047,796			

Region 10 Center TOTAL =	**$9,265,222**	**Region 4 Center Total =**	**$9,047,796**

Possible Annual Savings ** =	**$217,426**

** Savings does not account for cost of staff or services retained by existing agencies for administrative or non-dispatch associated tasks.

Table 10
Estimated Migration and Operating Cost Estimates, Four Center Option

Physical Space/Remodel Costs	**Estimates Capital Costs (3 Sites , No change at Olmsted)**	**Estimated Annual Operational Costs (4 Sites)**
Remodel Cost @ $75 / sq ft. includes the following: (5125 sq ft @ 2 sites, 5875 sq ft @ 1 site, 0 sq ft at Olmsted site)		
Dispatch Center		
Supervisor Offices		
Equipment Room		
Raised Flooring		
Electrical		
Security		
Generator / UPS		
Sub Total:	**$ 1,209,375**	
Staffing	**Estimates Capital Costs**	**Estimated Annual Operational Costs**
Relocation Costs	(TBD)	
Staffing (assuming high average)		$7,448,811
Other		
Sub Total:	**(TBD)**	**$7,448,811**
Technology	**Estimates Capital Costs (4 Sites)**	**Estimated Annual Operational Costs (4 Sites)**
Center Technology Costs:		
New MCC7500 IP Radio Consoles & Equipment for 8 positions	$640,000	
Dispatch Console Furniture (15)	$340,000	
Digital Logging Recorder Upgrades	$360,000	
E - 911 Phone System Upgrades	$300,000	
Geographic Information System (GIS) Integration	$300,000	
CAD system upgrades / Integration	$300,000	
Mobile Data Systems w AVL/GPS (Wabasha, Dodge, Fillmore, Houston)	$1,000,000	
Backup Systems	$150,000	
Relocate Existing Center Electronics	$ 150,000	
Connections to Legacy Systems	$ 300,000	
Repairs, Alterations, Maintenance and other Operating Costs (based on existing Maintenance costs + 20%)		$1,598,986
Sub Total:	**$3,840,000**	**$1,598,986**
4 Center Option Grand Total:	**$5,049,375**	**$9,047,796**
		Original 10 Center Ops Cost = $ 9,265,222
		Delta = ($ 217,426)
		Estimated Payback = 23 years

6.0 Three Center Option

6.1 Geography and Alignment

The three center consolidation scenario proposes that the 11 southeast Minnesota counties would be divided into three regional dispatch centers. The selection of counties affiliated with each region for this consolidation scenario is based primarily on common transportation corridors. There was also consideration given to geographic proximity, a desire to balance the population distribution and call volume activity within the region. The new centers would include: a Highway 61 Corridor Center with a consolidation of Goodhue, Wabasha, Winona and Houston Counties; an Interstate 90 / Highway 14 Central Corridor Center with a consolidation of Dodge, Fillmore, Mower and Olmsted Counties; and an Interstate 35 Corridor Center including Freeborn, Rice and Steele Counties. The diagram in Figure 5 represents the four center geographic distribution scenario.

Figure 5 – Map of Three Center Option: Transportation Corridors

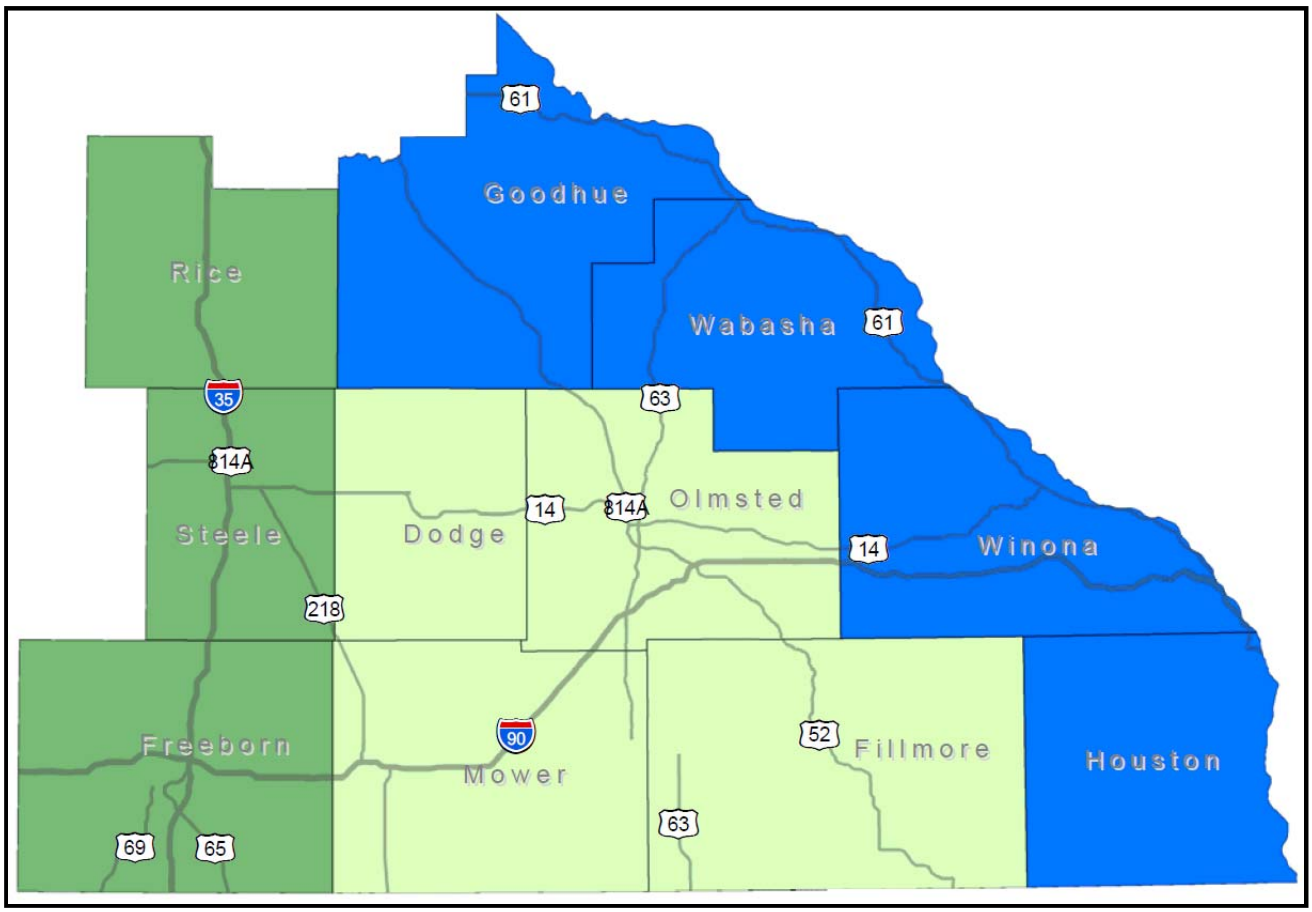


Table 11 reflects the current county populations, estimated total activity (911 and Admin calls, Radio Traffic volume, and CAD records created), and current center staffing levels. (NOTE: activity totals are subject to differing definitions and collection methods from jurisdiction to jurisdiction).

Table 11
Current PSAP Data, Three Center Option

3 Center Option: Hwy 61 Corridor

County	Population	Total Activity	Staff
Goodhue	46,183	416,040	12.00
Wabasha	21,676	202,298	11.00
Winona	51,461	441,883	13.25
Houston	19,027	160,023	9.00
Total	**138,347**	**1,220,244**	**45.25**

3 Center Option: I 90/Hwy 14 Corridor

County	Population	Total Activity	Staff
Olmsted County	144,248	714,716	25.00
Dodge County	20,087	164,785	9.20
Mower Count	39,163	476,479	10.75
Fillmore County	20,866	198,786	7.00
Total	**224,364**	**1,554,766**	**51.95**

3 Center Option: I 35 Corridor

County	Population	Total Activity	Staff
Rice/Steele County	100,718	622,729	21.00
Freeborn County	31,255	110,997	10.00
Total	**131,973**	**733,726**	**31.00**

6.2 Customers

The traditional customers served by the current 10 PSAPs will continue to be served from any restructured center configuration. One goal of this analysis is to determine to what extent, if any the level of services to these customers can be at minimum maintained, and ideally improved through the restructuring process. This business plan acknowledges that some services, although possible to provide remotely through the use of technology, would be provided with a higher level of service and more cost effectively if provided locally. Some of the services not proposed for inclusion in this consolidation plan are: walk-up window customer service, after-hour's facility access, monitoring building cameras, primary or backup jailer functions, business hours administrative call activity, administrative typing and filing tasks, and other general clerical or support functions not considered traditional E-911 PSAP center core functions. This will introduce a change in the level of service provided in certain PSAPs, particularly for Houston, and Mower Counties. It is anticipated that agencies participating in a consolidated PSAP project will need to look at some level of work process re-engineering, to reassign or eliminate some non-dispatch tasks. One example of this may be to replace late night telephone answering services with voicemail systems. In other instances, some current staff positions will likely need to be retained at existing sites or some form of task and service re-engineering will be needed to accommodate those services not incorporated into a consolidated operation.

Table 12
Customer Alignment Tables, Three Center Option

3-Center Option, Transportation, Hwy 61 Customers

Agency	Law	Fire	EMS	Other
County				
Goodhue	• Red Wing PD • Cannon Falls PD • Zumbrota PD • Goodhue PD • Kenyon PD • Prairie Island Tribal PD	• Red Wing FD • Zumbrota • Pine Island FD • Goodhue FD • Cannon Falls FD	• Red Wing • Zumbrota • Cannon Falls • Kenyon (dispatch by Goodhue)	• Meisville (paged by Dakota Co.) • Randolph Fire (Dakota Co.) • North Field Fire (Dispatched by Rice Co.) • Mazzepa Fire (Wabasha Co.) • West Concord
Houston	• Houston Co. Sheriff • La Crescent PD • Hokkah PD • Houston PD • Caledonia PD • Spring Grove PD	• La Crescent FD • Hokkah FD • Houston FD • Caledonia FD • Spring Grove FD • Eitzen FD • Brownsville FD	• Houston • Caledonia • Spring Grove • New Albin Fire & Ambulance	• Backup jailer for the entire jail • Genoa Nuclear plant (decommissioned) code red • Siren activations • One court security • Courts logistics • Reverse 911 • Dispatcher controls elevator, sally ports, doors, etc. • Communication with Highway Dept (won't dispatch) & Environmental Services
Wabasha	• Wabasha Co. Sheriff • Wabasha PD • Lake City PD • Plane View PD • Kellogg PD • Contract with Mazeppa & Elgin PDs	• Lake City FD • Zumbro Falls FD • Elgin FD • Kellogg FD • Mazeppa FD • Plainview FD • Wabasha FD	• Zumbro Falls First Responders • Mazeppa First Responders • Kellogg First Responders • Lake City Ambulance • Kellogg Ambulance • Plane View Ambulance	• Public Utilities (Excel, City Water) • DNR & State Patrol • Parks • Jail (transports, schedule/trip plan, Jail visitation, video visitation)
Winona	• Winona Co. Sheriff • Winona PD • Goodview PD • Lewiston PD • St. Charles PD	• Winona FD • Goodview FD • Minnesota City FD • Rolling Stone FD • Lewiston FD • St. Charles FD • Wilson FD • Ridgeway FD • Nodine FD • Pickwick FD • La Crescent FD • Attura FD • Dakota FD • Hidden Valley FD • Plainview FD	• Stockton & Elba Ambulance • Winona • Altura • Lewiston • St. Charles • Tristate • Rushford, • Plainview (fire and ambulance) • Air EMS - Medlink & Mayo	• County Admin • Winona County Highway Department • Us Fish & Wildlife • Court Security • Winona City Courts, • Jail Control Point (doors), monitor facilities

3-Center Option, Transportation, I 90/Hwy 14 Customers

Agency	Law	Fire	EMS	Other
County				
Dodge	• Dodge County Sheriff • West Concord PD • Kasson PD • Mantorville PD • Dodge Center PD • Claremont PD • Hayfield PD	• West Concord FD • Kasson FD • Mantorville FD • Dodge Center FD • Claremont FD • Hayfield FD • Blooming Prairie FD (has service area in Dodge Co, dispatched by Steele Co) • Pine Island (dispatched by Goodhue County, paged by phone from Dodge County)	• Mantorville FD • Dodge Center FD • Clarmont FD • Dodge Center Ambulance • Hayfield Ambulance, • West Concord Ambulance • Blooming Prairie Ambulance (same territory as FD)	• Public Health • Probations • Emergency Management • Window walkups • Assist & communicate w/State Patrol, Mayo One, Public Works, & DNR. • Have contact with Highway Departments.
Fillmore	• Fillmore County Sheriff • Preston PD • Chatfield PD • Rushford PD • Fountain PD • Ostrander PD	• Canton FD • Chatfield FD • Fountain FD • Harmony FD • Lanesboro FD • Mabel FD • Ostrander FD • Preston FD • Rushford FD • Spring Valley FD • Wykoff FD	• Spring Valley Ambulance • Chatfield Ambulance • Preston Ambulance • Lanesboro Ambulance • Harmony Ambulance • Mabel Ambulance • Rushford Ambulance • Wykoff First Responders • Ostrander First Responders • *Gold Cross Ambulance • *Tri-State Ambulance • *Leroy Ambulance • *Mayo 1 helicopter • **(* Out of County)**	• Have contact with Highway Department • Jail services • Window contact for customers • Sports contract • Transcriptions/Radio, DVD/tapes of DWI arrests for courts • siren activation (not all communities) for Preston, Canton, Peterson, & Waylen • Enter warrants from the courts • Enter all ICR (CJIS) • Some state patrol dispatching • Page for anyone in the 867 prefix.
Mower	• Mower County Sheriff • Austin PD • City of Adams PD • Browns Dale PD • Lyle/Mapleview PD • Grand Meadow PD • Contract services for Leroy	• Maple view FD • Browns Dale FD • Grand Meadow FD • Leroy FD • Adams FD • Lyle FD • Austin FD • Dexter FD	• Adams • Leroy • Grand Meadow • Austin (Gold Cross)	• County & City Attorneys • Human Services • Back ground checks for City of Austin & Housing & Redevelopment • Posse • Police Reserves (shared) • DNR & State Patrol • Community Service Officers, includes animal calls • Military & Volunteer background checks • Finger prints • Jobs for schooling & adoptions • Admin support

Agency	Law	Fire	EMS	Other
County				
Olmsted	• Olmsted County Sheriff • Rochester PD Outside county: • Chatfield to Fillmore • Goodhue to Pine Island.	• Byron FD • Stewartville FD • Rochester FD • Hayfield FD • Chatfield FD • Elgin FD • St. Charles FD • Zumbro Falls FD • Pine Island FD • Oronoco FD • Dover FD • Eiota FD	• Chatfield • Eiota • Elgin • St. Charles • Gold Cross • Pine Island • Stewartville • Byron	• Page County Coroner • Court Security • Warrant Confirmation • Security camera at front door • Direct line ring down from all 5 fire stations, IBM, Airport, & Public Utilities

3-Center Option, Transportation, I-35 Customers

Agency	Law	Fire	EMS	Other
County				
Freeborn	• Freeborn County Sheriff • Alden PD • Albert Lea PD • Freeborn Co Jail Transport • DNR & State Patrol	• City of Albert Lea FD • Albert Lea Township FD • Alden FD • Clarks Grove FD • Conger FD • Emmons FD • Freeborn FD • Geneva FD • Hartland FD • Hayward FD • Hollandale FD • London FD • Manchester FD • Myrtle FD • Twin Lakes FD	• Mayo Clinic Health Systems • Albert Lea • Freeborn • New Richland • Gold Cross Ambulance, • Blooming Prairie • Lake Mills (Iowa)	• Public Health • Environment Services • County Highway • City Public Works • Emergency Management • Walk up window • Video visitation
Rice/Steele	• Rice County Sheriff • Steele County Sheriff • Faribault PD • Northfield PD • Lonsdale PD • Dundas PD • Morristown PD • Owatonna PD • Blooming Prairie PD	•Faribault Fire •Northfield Fire •Lonsdale Fire •Morristown Fire •Nerstrand Fire •Owatonna Fire •Medford Fire •Ellendale Fire •Blooming Prairie Fire	•Transfer to North Ambulance •Transfer to Gold Cross •Transfer to Allina Ambulance •Page Ellendale Ambulance •Page Blooming Prairie Ambulance	• Call out for tow trucks • Page weather spotters • Auto dial (code red) notification to residents for any warnings.

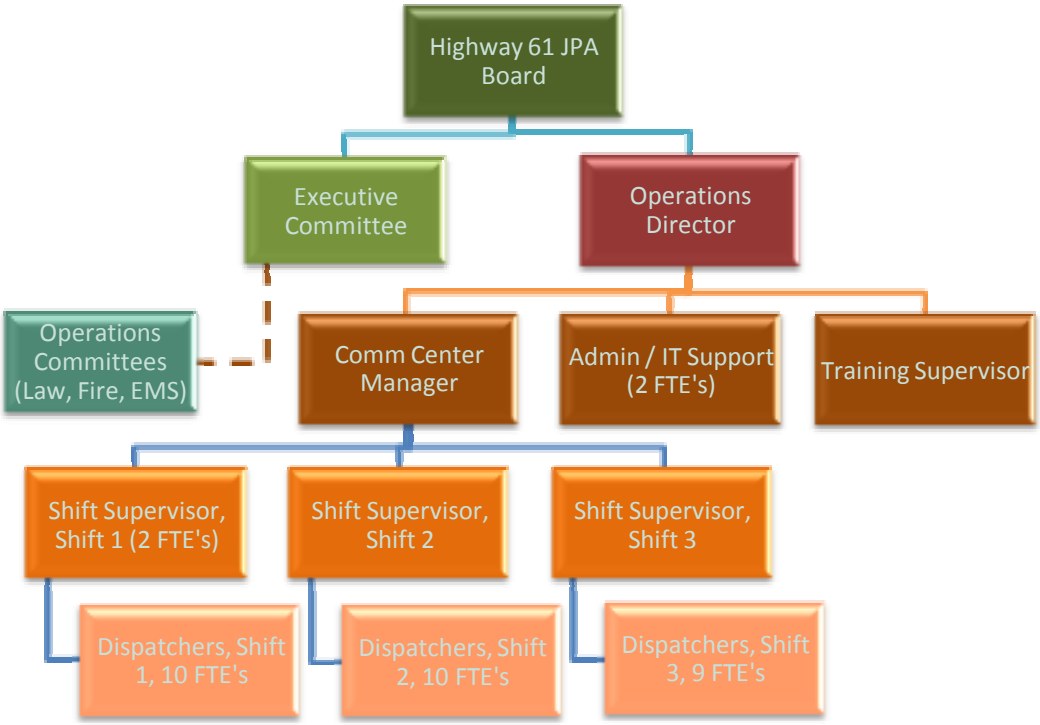
6.3 Management and Organization

The restructuring of the current PSAPs to create a three center model will change the proximity, availability and relationship between the communications personnel and the current Sheriff's office, local police departments, and to some extent fire and EMS Service personnel. Depending on the final locations of the new centers there will be certain

customers that no longer house a communication center. Accountability of the communications center organization structure is an important consideration to the creation of the new model of providing dispatch services for the region. To help assure that all counties involved in a dispatch consolidation receive a comparable level of services there are advantages to having the centers report through a new management level position to a new joint powers board structure. The JPA membership should be representative of all participants in the PSAP. Section 8 of this report discusses Governance Structure options in more detail. For the 3center consolidation scenario the option of a host agency – fee-for-services model is still an option, but may be less effective. As the number of participating agencies increases it is likely more important to create a model of governance that allows for broader input and representation from stakeholder groups. The organization chart shown in Figure 6 reflects the JPA model of governance. Regardless of the governance model chosen in the 3-center consolidation option, it is recommended to include a dedicated Communications Center Manager and additional Shift Supervisor positions. The advantages of this new management structure include:

- Increases potential to establish uniform work processes within the PSAP and within the region.
- Creates a more even distribution of work load within the PSAPs.
- Concentrates work force to provide support (dispatchers can assist each other when they are all located in one location).
- Limits potential for differing levels of service based on county relationship and physical proximity.
- More focused accountability for communications function.

Figure 6 – Sample Organization Chart, Three Center Option



Within each of the new centers the proposed staffing plan will include a Communication Center Manager that will report to the JPA Board. The Communication Center Manager will be responsible for all aspects of the PSAPs operations, staffing, and delivery of services. The plan provides for three Radio Communication Supervisor positions and 19 Radio Communication Operators. Because of the autonomous nature of a stand-alone PSAP that is not able to rely on a host agency for typical overhead support services in-house, this plan proposes the addition of one administrative support staff position and one information technology staff position for each center. Other support services, such as legal, fiscal and human resources would most likely be received through contractual arrangements from a participating member or private entity. The staffing level recommended for the 4-center PSAP consolidation is shown in the Table 14. The staff levels were determined using a traditional approach to building a staffing estimate for a consolidated center that projects staff need based on current center work load (measured volume or calls, dispatches, and records created) known as the Erlang C staffing model. The Erlang C is a traffic modeling formula used in call center scheduling to calculate delays or predict waiting times for callers. Erlang C also calculates the resources that will be needed to keep wait times within the call center's target limits. The Erlang C traffic model estimates how many dispatchers are needed in a call center.

These computational recommendations were then compared against real world data to determine if the recommendation is appropriate. A comparison was made against four known call centers with similar characteristics. Two different metrics were used for the comparison; total population serviced and total annual call volume processed. Research was done to collect data from 12 different active dispatch centers ranging in size, population, and activity level. The complete PSAP Benchmark Comparison Table is included in Appendix A. The comparisons offered a checks and balance approach to the calculation methods, and some reassurance of accuracy for the proposed staff level recommendations. Table 13 provide baseline call volume and staffing data provided by each or the 10 PSAPs in the region. The tables also project staffing estimates for dispatcher staff levels to accommodate the aggregate call volumes for potential future PSAP configurations and the comparison to existing centers with staff counts for these actual operational centers.

Table 13
Staffing Benchmark Comparison Tables, Three Center Option

3 Center, Transportation					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
Hwy 61	138347	350537	45.25	36.8	Scott Co. Winnebago Co.	130000 166994		20 33	40.25	Hwy 61 PSAP Staff of 36.8 appears to be midpoint and appropriate
					Anoka DCC		307700 300451	42 66		

(Hwy 61 = consolidation of Goodhue, Wabasha, Winona & Houston Counties)

3 Center, Transportation					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
I90/Hwy 14	224364	457837	51.95	36.8	Red River Washington Co.	208777 238136		37 31	44.00	I90/Hwy 14 PSAP Staff of 36.8 may be on the low side. It depends on how much admin traffic continues to be a dispatch service.
					Anoka DCC		307700 300451	42 66		

(I 90/94 = consolidation of Dodge, Olmsted, Mower & Fillmore Counties)

3 Center, Transportation					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
J35	131973	189365	31	25.2	Scott Co. Winnebago Co.	130000 166994		20 33	27.25	
					Scott Co. Outagamie Co. (WI)		172000 199431	20 36		

The number of employees available to staff a center, the number of dispatch positions actively staffed at any one time, the number of supervisory staff, and the availability of staff to support unexpected events all play a role in the level of service provided by a center. Events such as disasters and large emergencies require a larger pool of staff to sustain PSAP operations through a crisis. It is also important to adequately staff the center because when individuals call in sick, take extended leaves, or require training it impacts the ability of a center to provide a high level of service. Staffing levels and staff performance will impact levels of service during the restructuring transition and the ongoing levels of service provided from each county's current PSAP. Staffing considerations will also have a significant impact on the cost of the restructuring effort.

Table 14 summarizes the 3-center consolidated PSAPs showing the recommended staffing models for each PSAP. The Erlang C modeling used to prepare these calculations includes the following information based on the 2010 calendar year:

- Actual 2010 Total Calls (incoming 911 and admin)
- Estimated Radio Traffic
- Estimated CAD Records

Assumptions:

- Average work week = 35.5 hours, average work year = 1,846 hours.
- I-35 PSAP manager assumed to perform floor supervision duties
- 2,920 staff hours required to fill one position 8 hours a day, 365 days per year
- Minimum of two dispatchers on Duty at all times (17,520 staff hours)

Table 14
Proposed Staffing Model, Three Center Option

								Dispatch Shift Allocation				On-Duty Dispatch Avg.		Average Supervisory daily coverage(hours)
3 Center Model	Total FTEs:	Mgr	Admin	I/T	Superv.	Dispatchers		Shift 1	Shift 2	Shift 3				
Hwy 61	37	1	1	1	5	29		10	10	9		6.1		25
I-90/Hwy 14	37	1	1	1	5	29		10	10	9		6.1		25
I-35	26	1	1	1	4	19		6	7	6		4.0		25
Totals:	**100**	**3**	**3**	**3**	**14**	**77**		**26**	**27**	**24**				
Hwy 61: Goodhue, Houston, Wabasha, Winona. I90/Hwy 14: Dodge, Fillmore, Mower, Olmsted. I 35: Freeborn, Rice/Steele.														

Hwy 61: Goodhue, Houston, Wabasha, Winona. I-90/Hwy 14: Dodge, Fillmore, Mower, Olmsted. I- 35: Freeborn, Rice/Steele.

This plan proposes that existing personnel in the current southeast PSAPs will be encouraged to relocate to the new consolidated centers. The dispatchers from each represented county would come with different starting salaries and benefits. The cost estimates in this plan allow for Average Salary levels based on the highest average from the perspective joining centers. Governance and transition planning will need to establish baseline benefits such as base salary range, benefits, seniority and any other related issues. Even if employment at the newly created PSAP will represent a new employment relationship, consideration will need to be given to establishing a relationship between tenure and compensation and benefits for transitioning staff. The goals established by the PSAP Study Group called for policies that provide, at a minimum, parity, as well as an improved opportunity for employment as to what exists for the current PSAPs for each participating county. For staff that chose not to relocate to the new consolidated center, the participating agency PSAP will use existing contract allowances such as encouraging severance and retraining benefits.

6.4 Product and Service Description

All three PSAPs in this scenario will operate 24 hour per day, 365 days per year. The services provided by the three centers will replicate as much as practical the services currently provided from the 10 current PSAPs in the region. There may be some administrative telephone calls and peripheral agency specific administrative work that the current PSAPs perform that is not done from the new consolidated centers.

The primary services provided from the three PSAP configuration will include:

- E-911 call taking / call transfers
- After hours agency specific administrative phone line call taking *
- Emergency responder radio dispatching (police, fire, EMS)
- Notification of other emergency responders not dispatched by PSAP. (private ambulance, mutual aid agencies)
- Monitoring of radio traffic / coordination of field personnel
- Creation and updating of CAD system records
- Roll over telephone support for local PD and Fire stations for after hours calls
- Reverse E-911 public notification
- Warning siren activations
- Retrieval of logged audio records for courts
- Monitoring of building alarms
- Monitoring of security cameras
- Participate in agency policy and process decision making
- Provide information to local businesses (Call Tree / Key holder)
- Requesting Tow services
- Coordination with impound lot
- Coordination with local EOCs and emergency management
- Systems alarm monitoring (ARMER)

A listing of services provided by the current centers that would not be included in the consolidated PSAP includes:

- Standard business hours administrative call taking*
- Customer window information requests
- Backup support for jail operations
- After hours building access or facility monitoring

The services provided by the PSAP should be well defined and documented in Customer Service Level Agreements that accompany any contract or Joint Powers governance model. The * listed above references that administrative calls currently make up a significant percentage of call volume and activity for the individual PSAPs. The staffing levels determined by the Erlang C Model and the subsequent comparisons with real world PSAPs suggest that a determination of how administrative call traffic is supported in a consolidated environment will have a bearing on staffing requirements and may alter the staff levels reflected in this Business Plan.

6.5 Technology Considerations

The migration from 10 PSAPs in the Southeast Minnesota region to three consolidated PSAPs will require a capital investment in technology upgrades, relocation, and integration. Attention to technology requirements and establishment of a goal of uniformity and compatibility of technologies used within the geographic jurisdiction of each of the three centers is important. Linkages between each PSAP and backup capabilities between the centers is also an increasing requirement. This plan strives to assure the new centers operate effectively, adequately support the demands of consolidated operations, meet industry standards and best practices, and prepare for the necessary expansion of systems and technologies.

There will continue to be some variation in the technologies deployed among the three PSAPs based on the unique nature of the counties they currently serve and the differing system elements that have been deployed in different PSAPs throughout the southeast region. The primary systems considered for migration to the new 3-center configuration include:

- Next Generation E-911 telephone system.
- Multiple position radio dispatch workstation with multiple channels and multiple speaker configurations. (Number of positions is dependent on staff levels and is identified in Section 6.6 - Facilities/Physical Space)
- A uniform computer aided dispatch system and records management system (CAD / RMS) connected to multiple remote users.
- Monitors, displays, and servers
- 911 and radio call recording systems
- Supporting mobile data infrastructure
- Supporting radio system infrastructure (ARMER, Legacy VHF, Legacy Paging)
- Local and Remote Video Security Systems

The new consolidated PSAP centers will require the standardization of CAD systems and need to choose a single system for each center. Three of the counties in the Highway 61 Corridor Center currently have CIS for their CAD systems which can be fiscally advantageous and from a personnel comfort level perspective. However, the system would need to be evaluated and upgraded ensure that it has the functionality necessary for a larger consolidated PSAP.

Table 15 shows current CAD features used by each county and what would be recommended in the consolidated PSAP.

Table 15
Current CAD Systems and Options Comparison Tables, Three Center Option

3 Center Option: Transportation, Hwy 61 PSAP, Current CAD Systems

CAD	Goodhue (CIS)	Houston (No CAD*)	Wabasha (CIS)	Winona (CIS)	Consolidate PSAP Required CAD Features
911 ANI/ALI Interface	YES	N/A	YES	YES	Required
State/NCIC Interface	YES	N/A	YES	YES	Required
Other Interfaces (MDC)	YES	N/A	NO, MDC	NO	Required
Alphanumeric Paging	NO, Not via CAD	N/A	NO, Consoles	YES	Required
Automatic Vehicle Location	YES	N/A	NO	NO	Required
Emergency Medical Dispatch	NO	N/A	NO	NO	Not Required
Fire Mobile Data	NO	N/A	NO	NO	Not Required
Fire Station Alerting	NO	N/A	NO, VHF paging, agency incident log	NO	Not Required
Fire/EMS Records Management	YES, Track basic ICR	N/A	YES, ICR	YES	Required
Mobile Mapping	YES	N/A	YES	YES	Required
Police Mobile Data	YES	N/A	NO	YES	Required
Police Field Reporting	YES, Use CIS via Citrix	N/A	YES, Partial, word processing only	YES	Required
Police Records Management	YES	N/A	YES	YES	Required
Radio Console/System – Push-to-Talk/Emergency	Yes	N/A	NO	NO	Required
Rip & Run	NO, Have capability, not used	N/A	NO	YES	Required
TDD/TTY	NO, Not in CAD (it's on the phone)	N/A	YES	NO	Required

* Houston County does not use CAD but has RMS Police Central for ICR and jail information.

Table 15 (Continued)

3 Center Option: Transportation, I 90/Hwy 14 PSAP, Current CAD Systems

CAD	Dodge (CIS)	Fillmore (TAC 10)	Mower (Positron Intrado)	Olmsted (New World Systems)	Consolidate PSAP Required CAD Features
911 ANI/ALI Interface	YES	N/A	YES	YES	Required
State/NCIC Interface	YES	N/A	YES	YES	Required
Other Interfaces (MDC)	YES, GIS Mapping	N/A	YES, Portal Records Access	YES	Required
Alphanumeric Paging	YES, VHF	N/A	YES, Radio Console	YES	Required
Automatic Vehicle Location	NO	N/A	YES	YES	Required
Emergency Medical Dispatch	NO	N/A	NO	NO	Not Required
Fire Mobile Data	NO , Can Fax map, quick send	N/A	NO	YES	Required
Fire Station Alerting	NO	N/A	NO	NO	Not Required
Fire/EMS Records Management	Not Used	N/A	YES	YES	Required
Mobile Mapping	NO	N/A	YES	YES	Required
Police Mobile Data	YES, Air card	N/A	YES	YES	Required
Police Field Reporting	YES, From computer in squad car	N/A	YES	YES	Required
Police Records Management	YES	N/A	YES	YES	Required
Radio Console/System – Push-to-Talk/Emergency	NO	N/A	YES	YES	Required
Rip & Run	NO	N/A	NO	YES	Required
TDD/TTY	NO	N/A	YES	YES	Required

3 Center Option: Transportation, I-35 PSAP, Current CAD Systems

CAD	Freeborn (CIS)	Rice/Steele (LOGIS)	Consolidate PSAP Required CAD Features
911 ANI/ALI Interface	YES	YES	Required
State/NCIC Interface	YES	YES	Required
Other Interfaces (MDC)	YES	NO, RMS is shared among LOGIS subscribers.	Required
Alphanumeric Paging	NO	YES, Separate from CAD	Required
Automatic Vehicle Location	YES - Albert Lea Only	YES	Required
Emergency Medical Dispatch	NO	NO	Not Required
Fire Mobile Data	NO	NO	Not Required
Fire Station Alerting	YES	NO	Required
Fire/EMS Records Management	NO	YES	Required
Mobile Mapping	YES	YES	Required
Police Mobile Data	YES	YES	Required
Police Field Reporting	YES	YES	Required
Police Records Management	YES	YES	Required
Radio Console/System – Push-to-Talk/Emergency	YES	NO	Required
Rip & Run	NO	YES	Required
TDD/TTY	YES	YES	Required

The new designated PSAP Center will have to obtain several files including, but not limited to, GeoFiles, Master Name Files, Incident History Files and others, from the counties that will be consolidated. For counties like those in the Hwy 61 Center (with the exception of Houston County) that have the same CAD software, this is as simple as updating the file with the area to be dispatched and does not involve file conversions. It most likely will involve data entry work on the consolidated PSAP's CAD program.

For the consolidated counties that have different software (as in the I-90/94 and I- 35 Centers), a standardized CAD program will need to be chosen and file conversions done to get the data into the consolidated PSAP's CAD system. Selection of a CAD system that already exists for one of the county's existing PSAP facilities will reduce file conversion costs.

Dispatcher Radio Console systems are used to communicate with field personnel and other agencies. In many PSAP Centers, the radio console system interfaces with the CAD system to provide the dispatcher with the identification of radios/units calling to enhance communications. The consolidated PSAP will most likely be part of the Minnesota State ARMER system. Currently only two (2) types of radio consoles have been approved for peer level connection to the ARMER system backbone, the Motorola Gold-Elite and the MCC 7500. Motorola announced the intent to cancel the Gold-Elite consoles with the last order date of September 30th, 2011 and the last ship date of December 31st, 2011. Table 16 shows the type of console systems each county currently has in their dispatch center. Freeborn, Houston, Rice/Steele, Wabasha and Winona have all upgraded or are in the process of upgrading to the MCC 7500 Console. Dodge, Fillmore and Goodhue are currently using the Motorola Gold Elite. Mower has an Orbicom Console and is the only Southeast County using a non-Motorola console. Mower is also the only county in the southeast not on the ARMER system.

Table 16
Current Dispatch Console System Comparison, Three Center Option

3 Center Option: Transportation, Hwy 61 PSAP, Current Radio Console System				
County	Goodhue	Houston	Wabasha	Winona
Radio Console	Motorola MCC 7500	Motorola MCC 7500	Motorola MCC 7500	Motorola MCC 7500
3 Center Option: Transportation, I-90/94 PSAP, Current Radio Console System				
County	Dodge	Olmsted	Mower	Fillmore
Radio Console	Motorola Gold Elite	Motorola Gold Elite	Orbicom	Motorola Gold Elite
3 Center Option: Transportation, I-35, Southeast PSAP, Current Radio Console System				
County	Freeborn	Rice/Steele		
Radio Console	Zetron, MCC 7500 to be installed	Motorola MCC 7500		

6.6 Facilities / Physical Space

The primary criteria that drive space requirements include: the number, size and proximity of PSAP workstations; associated staffing considerations such as lockers, break room and conference rooms; electronic equipment and back up capability spaces; and future expansion needs. Other primary considerations for the facility include its geographic location and proximity within the region served; the capacity, robustness, and resiliency of building electrical, mechanical, and communication systems; physical security of the center and the potential for related uses such as regional Emergency Operations Centers or regional training facilities

Creation of the Hwy 61, I-90/94 and I-35 PSAPs will provide the opportunity to create new work spaces for those sites. None of the current centers has expansion space in on their current dispatch floor to accommodate the number of staff or associated work stations in their current centers without some level of remodeling or expansion of current facility. There are however, several opportunities to create adequate space by expanding within several of the existing centers, occupying adjacent spaces and upgrading to accommodate the additional staff and work stations required of the new three center PSAP configuration.

PSAP facilities are staffed 24/7 to provide continuous public access to the agencies. Physically consolidation PSAPs will require new or modified PSAP facilities. Table 17 summarizes facilities requirements for each consolidated PSAP in the 4-center option. The square footage is driven by the number of call-taker and dispatcher positions that were developed using the Erlang C model based on workload information provided by the existing PSAPs.

Table 17
Facility Space Requirements Recommendation, Three Center Option

	Work Stations *	Executive Directors Office	Comm Center Managers Office	Dispatch Supervisors Office	Break Room/Kitchen	Conference Room	Admin Office/Copy and File Room	Equipment Room*	Equipment Repair and Maintenance Room	Locker Room	Bath Rooms and Showers	Public Bath Rooms	PSAP Sq Ft Sub Total	Building Circulation 15%	Building Services 10%	Gross Building Square Feet
3 Centers																
Hwy 61																
Quantity	14		1	1	1	1	1	22	1	1	2					
Size (sq ft)	150		150	150	300	300	150	25	250	400	200					
Total:	2100		150	150	300	300	150	550	250	400	400	0	**4750**	713	475	**5938**
I-90/Hwy 14																
Quantity	14		1	1	1	1	1	22	1	1	2					
Size (sq ft)	150		150	150	300	300	150	25	250	400	200					
Total:	2100		150	150	300	300	150	550	250	400	400	0	**4750**	713	475	**5938**
I-35																
Quantity	10		1	1	1	1	1	22	1	1	2					
Size (sq ft)	150		150	150	300	300	150	25	250	400	200					
Total:	1500		150	150	300	300	150	550	250	400	400	0	**4150**	623	415	**5188**

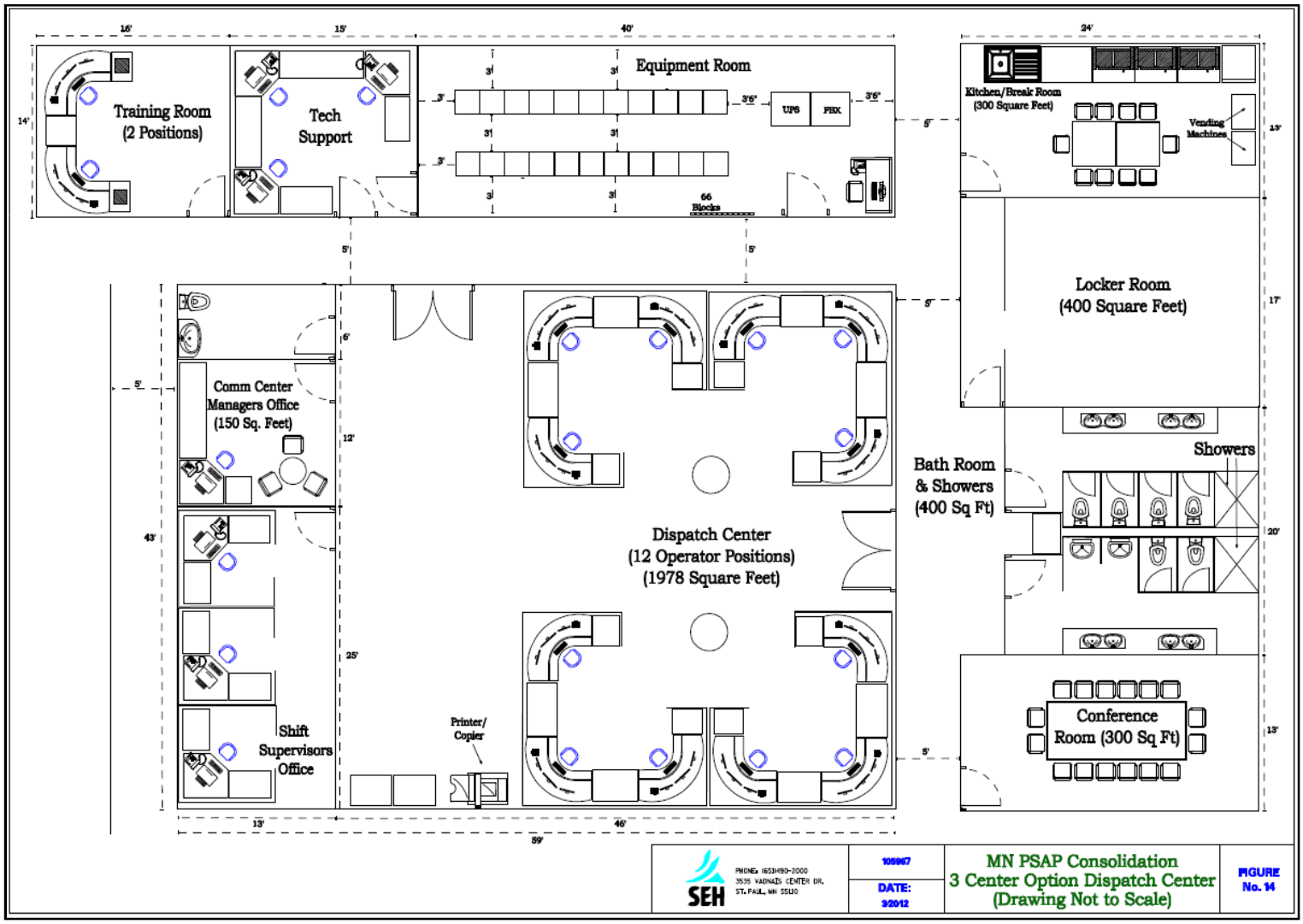
* Assumptions:
- Ops floor square footage calculated at 150 sq ft per work station.
- Equipment Room calculated at an average of 25 sq ft per rack.

The sites that offer possible space for expansion of existing space to accommodate one of the consolidated PSAPs include;

(NOTE: For discussion)

- Goodhue County; expand the current PSAP into the adjacent EOC/ Conference room space. (3545 Sq feet available for expansion)
- Wabasha County, expand the current PSAP into adjacent storage and clerical space (2010 Sq feet available for expansion)
- Pearl Street - Rice/Steele County, relocate PSAP and expand into facility lower level conference room, office and locker room space. (4035 Sq feet available for expansion)
- Freeborn County; expand current PSAP into adjacent records / finance office space. (1911 Sq feet available for expansion)

Figure 7 – Sample Consolidated PSAP Layout, Three Center Option



6.7 Migration and Operational Cost Estimate - Three Center PSAP Consolidation

The migration from 10 centers to a new configuration of three consolidated PSAP dispatch centers will require an initial investment in facilities remodeling and expansion, staffing relocation, and new technology implementation. The operation of the three centers will also have continuing operating costs. The estimated project costs listed below are derived from several sources including 2010 SE MN PSAP operating budget figures, and SEH estimated technology system and hardware costs.

Table 18
MN Southeast PSAP Consolidation Project, PSAP Cost Comparison Options
3-Center Option: Transportation

Hwy 61 Corridor

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) {.5*1/4+.25*Pop+ .25*Vol}
Goodhue County	46,183	33.4%	416,040	34.1%	12.00	$760,567	$63,380.58	$897,699					$891,879	$910,923	$784,667
Wabasha County	21,676	15.7%	202,298	16.6%	11.00	$675,621	$61,420.09	$722,608					$418,603	$442,933	$549,351
Winona County	51,461	37.2%	441,883	36.2%	13.25	$804,594	$60,724.08	$864,886					$993,806	$967,507	$824,295
Houston County	19,027	13.8%	160,023	13.1%	9.00	$494,514	$54,946.00	$522,314					$367,446	$350,372	$513,421
Total	**138,347**	**100.0%**	**1,220,244**	**100.0%**	**45.25**	**$2,735,296**	**$60,117.69**	**$3,007,507**	**37**	**$2,345,082**	**$326,653**	**$2,671,735**	**$2,671,735**	**$2,671,735**	**$2,671,735**

I 90/Hwy 14 Corridor

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) {.5*1/4+.25*Pop+ .25*Vol}
Olmsted County	144,248	64.3%	714,716	46.0%	25.00	$1,918,485	$76,739.40	$2,105,006					$2,096,279	$1,498,859	$1,306,355
Dodge County	20,087	9.0%	164,785	10.6%	9.20	$448,008	$48,696.52	$493,008					$291,914	$345,577	$566,943
Mower Count	39,163	17.5%	476,479	30.6%	10.75	$649,749	$60,441.77	$741,231					$569,135	$999,243	$799,665
Fillmore County	20,866	9.3%	198,786	12.8%	7.00	$350,000	$50,000.00	$378,000					$303,234	$416,882	$587,599
Total	**224,364**	**100.0%**	**1,554,766**	**100.0%**	**51.95**	**$3,366,242**	**$58,969.42**	**$3,717,245**	**37**	**$2,839,358**	**$421,204**	**$3,260,561**	**$3,260,561**	**$3,260,561**	**$3,260,561**

I 35 Corridor

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) {.5*1/2+.25*Pop+ .25*Vol}
Rice/Steele County	100,718	76.3%	622,729	84.9%	21.00	$1,377,889	$65,613.76	$1,829,732					$1,979,965	$2,201,915	$1,694,068
Freeborn County	31,255	23.7%	110,997	15.1%	10.00	$422,220	$42,222.00	$710,738					$614,426	$392,476	$900,323
Total	**131,973**	**100.0%**	**733,726**	**100.0%**	**31.00**	**$1,800,109**	**$53,917.88**	**$2,540,470**	**26**	**$1,705,958**	**$888,433**	**$2,594,391**	**$2,594,391**	**$2,594,391**	**$2,594,391**
										$6,890,397	$1,636,290	$8,526,687			

Region 10 Center TOTAL =	**$9,265,222**	**Region 3 Center Total =**	**$8,526,687**

Possible Annual Savings ** =	**$738,535**

** Savings does not account for cost of staff or services retained by existing agencies for administrative or non-dispatch associated tasks.

Table 19
Estimated Migration and Operational Costs, Three Center Option

Physical Space/Remodel Costs	Estimates Capital Costs (3 Sites , No change at Olmsted)	Estimated Annual Operational Costs (4 Sites)
Remodel Cost @ $80 / sq ft. includes the following: (5938 sq ft @ 2 sites; 5188 sq ft @ 1 site)		
Dispatch Center		
Supervisor Offices		
Equipment Room		
Raised Flooring		
Electrical		
Security		
Generator / UPS		
Sub Total:	**$ 1,365,120**	
Staffing	**Estimates Capital Costs**	**Estimated Annual Operational Costs**
Relocation Costs	(TBD)	
Staffing (assuming high average)		$6,890,397
Other		
Sub Total:	**(TBD)**	**$6,890,397**
Technology	**Estimates Capital Costs (4 Sites)**	**Estimated Annual Operational Costs (4 Sites)**
Center Technology Costs:		
Upgrade Gold Elite Consoles (3 positions)	$150,000	
Dispatch Console Furniture (19)	$380,000	
Digital Logging Recorder Upgrades	$450,000	
E - 911 Phone System Upgrades	$450,000	
Geographic Information System (GIS) Integration	$300,000	
CAD system upgrades / Integration	$450,000	
Mobile Data Systems w AVL/GPS (Wabasha, Dodge, Fillmore, Houston)	$1,000,000	
Backup Systems	$150,000	
Relocate Existing Center Electronics	$ 150,000	
Connections to Legacy Systems	$ 300,000	
Repairs, Alterations, Maintenance and other Operating Costs (based on existing Maintenance costs + 20%)		$1,636,290
Sub Total:	**$3,780,000**	**$1,636,290**
4 Center Option Grand Total:	**$5,145,120**	**$8,526,687**
		Original 10 Center Ops Cost = $ 9,265,222
		Delta = 738,535
		Estimated Payback = 6.7 years *

NOTE: Operations cost savings do not account for cost of staff or services retained by existing agencies for administrative or non-dispatch associated tasks.

7.0 Two Center Option

7.1 Geography and Alignment

The two center consolidation scenario proposes that the 11 southeast Minnesota counties would be divided into two regional dispatch centers. The selection of counties affiliated with each region is based on a desire to balance the population distribution and call volume activity within the region. For the purposes of this Business Plan a North – South split of the Southeast Region has been modeled. However, an East – West regional configuration is also viable and has equal merit. The two new consolidated centers would include: a North Center including participation from Dodge, Goodhue, Rice, Steele, Winona, and Wabasha Counties; and a South Center with Fillmore, Freeborn, Houston, Mower and Olmsted Counties. Figure 8 represents the two center north – south geographic distribution scenario.

Figure 8 – Map of Two Center Option: North – South

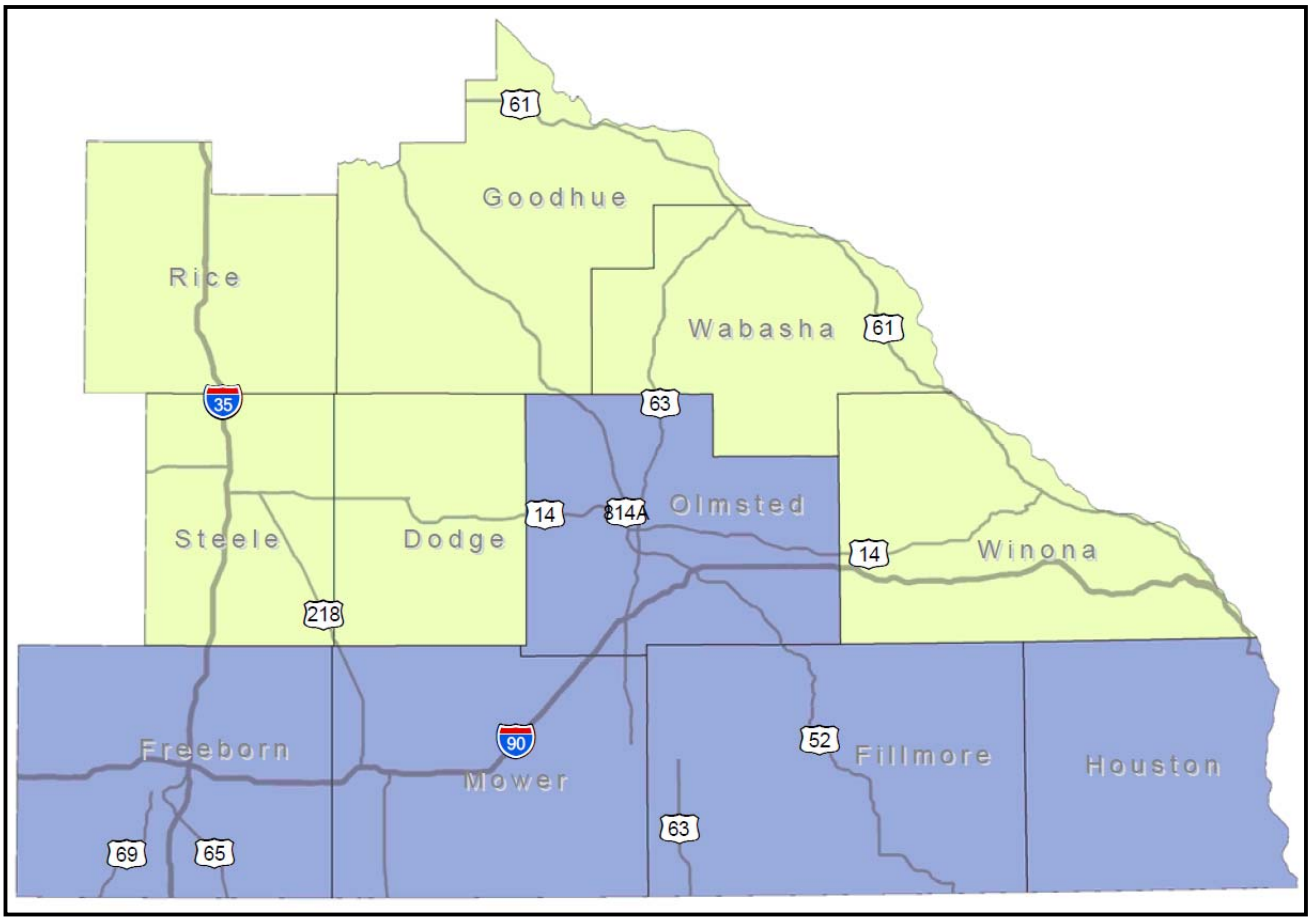


Table 20 reflects the current county populations, estimated total activity (911 and Admin calls, Radio Traffic volume, and CAD records created), and current center staffing levels. (NOTE: activity totals are subject to differing definitions and collection methods from jurisdiction to jurisdiction).

Table 20
Current PSAP Data, Two Center Option

2 Center Option: Northern Region

County	Population	Total Activity	Staff
Rice/**Steele** County	100,718	622,729	21.00
Goodhue County	46,183	416,040	12.00
Wabasha County	21,676	202,298	11.00
Dodge County	20,087	164,785	9.20
Winona County	51,461	441,883	13.25
Total	**240,125**	**1,847,735**	**66.45**

2 Center Option: Southern Region

County	Population	Total Activity	Staff
Olmsted County	144,248	714,716	25.00
Freeborn County	31,255	110,997	10.00
Mower Count	39,163	476,479	10.75
Fillmore County	20,866	198,786	7.00
Houston County	19,027	160,023	9.00
Total	**254,559**	**1,661,001**	**61.75**

7.2 Customers

The traditional customers served by the current 10 PSAPs will continue to be served from any restructured center configuration. One goal of this analysis is to determine to what extent, if any the level of services to these customers can be at minimum maintained, and ideally improved thru the restructuring process. This business plan acknowledges that some services, although possible to provide remotely through the use of technology, would be provided with a higher level of service and more cost effectively if provided locally. Some of the services not proposed for inclusion in this consolidation plan are: walk up window customer service, afterhours facility access, monitoring building cameras, primary or backup jailer functions, business time administrative call activity, administrative typing and filing tasks, and other general clerical or support functions not considered traditional E-911 PSAP center core functions. This will introduce a change in the level of service provided in certain PSAPs, particularly for Houston and Mower Counties. It is anticipated that agencies participating in a consolidated PSAP project will need to look at some level of work process re-engineering, to reassign or eliminate some non-dispatch tasks. One example of this may be to replace late night telephone answering services with voicemail systems. In other instances, some current staff positions will likely need to be retained at existing sites or some form of task and service re-engineering will be needed to accommodate those services note incorporated into a consolidated operation.

Table 21
Customer Alignment Tables, Two Center Option

2-Center Option, North/South, Northern Customers

Agency	Law	Fire	EMS	Other
County				
Dodge	• Dodge Co. Sheriff • West Concord PD • Kasson PD • Mantorville PD • Dodge Center PD • Claremont PD • Hayfield PD—	• West Concord FD • Kasson FD • Mantorville FD • Dodge Center FD • Claremont FD • Hayfield FD • Blooming Prairie FD (has service area in Dodge Co, dispatched by Steele Co) • Pine Island (dispatched by Goodhue Co., paged by phone from Dodge Co.)	• Mantorville FD • Dodge Center FD • Clarmont FD • Dodge Center Ambulance • Hayfield Ambulance, • West Concord Ambulance • Blooming Prairie Ambulance (same territory as FD)	• Public Health • Probations • Emergency Management • Window walkups • Assist & communicate w/State Patrol, Mayo One, Public Works, & DNR. • Have contact with Highway Departments.
Goodhue	• Red Wing PD • Cannon Falls PD • Zumbrota PD • Goodhue PD • Kenyon PD • Prairie Island Tribal PD	• Red Wing FD • Zumbrota • Pine Island FD • Goodhue FD • Cannon Falls FD	• Red Wing • Zumbrota • Cannon Falls • Kenyon (dispatch by Goodhue)	• Meisville (paged by Dakota Co.) • Randolph Fire (Dakota Co.) • North Field Fire (Dispatched by Rice Co.) • Mazzepa Fire (Wabasha Co.) • West Concord
Rice/Steele	• Rice Co. Sheriff • Steele Co. Sheriff • Faribault PD • Northfield PD • Lonsdale PD • Dundas PD • Morristown PD • Owatonna PD • Blooming Prairie PD	•Faribault Fire •Northfield Fire •Lonsdale Fire •Morristown Fire •Nerstrand Fire •Owatonna Fire •Medford Fire •Ellendale Fire •Blooming Prairie Fire	•Transfer to North Ambulance •Transfer to Gold Cross •Transfer to Allina Ambulance •Page Ellendale Ambulance •Page Blooming Prairie Ambulance	• Call out for tow trucks • Page weather spotters • Auto dial (code red) notification to residents for any warnings.
Wabasha	• Wabasha Co. Sheriff • Wabasha PD • Lake City PD • Plane View PD • Kellogg PD • Contract with Mazeppa & Elgin PDs	• Lake City FD • Zumbro Falls FD • Elgin FD • Kellogg FD • Mazeppa FD • Plainview FD • Wabasha FD	• Zumbro Falls First Responders • Mazeppa First Responders • Kellogg First Responders • Lake City Ambulance • Kellogg Ambulance • Plane View Ambulance	• Public Utilities (Excel, City Water) • DNR & State Patrol • Parks • Jail (transports, schedule/trip plan, Jail visitation, video visitation)

Table 21 (Continued) Customer Alignment Tables, Two Center Option				
Agency	**Law**	**Fire**	**EMS**	**Other**
County				
Winona	• Winona Co. Sheriff • Winona PD • Goodview PD • Lewiston PD • St. Charles PD	• Winona FD • Goodview FD • Minnesota City FD • Rolling Stone FD • Lewiston FD • St. Charles FD • Wilson FD • Ridgeway FD • Nodine FD • Pickwick FD • La Crescent FD • Attura FD • Dakota FD • Hidden Valley FD • Plainview FD	• Stockton & Elba Ambulance • Winona • Altura • Lewiston • St. Charles • Tristate • Rushford, • Plainview (fire and ambulance) • Air EMS - Medlink & Mayo	• County Admin • Winona Co. Highway Department • Us Fish & Wildlife • Court Security • Winona City Courts, • Jail Control Point (doors), monitor facilities

2-Center Option, North/South, Southern Customers

Agency	Law	Fire	EMS	Other
County				
Fillmore	• Fillmore Co. Sheriff • Preston PD • Chatfield PD • Rushford PD • Fountain PD • Ostrander PD	• Canton FD • Chatfield FD • Fountain FD • Harmony FD • Lanesboro FD • Mabel FD • Ostrander FD • Preston FD • Rushford FD • Spring Valley FD • Wykoff FD	• Spring Valley Ambulance • Chatfield Ambulance • Preston Ambulance • Lanesboro Ambulance • Harmony Ambulance • Mabel Ambulance • Rushford Ambulance • Wykoff First Responders • Ostrander First Responders • *Gold Cross Ambulance • *Tri-State Ambulance • *Leroy Ambulance • *Mayo 1 helicopter • **(* Out of County)**	• Have contact with Highway Department • Jail services • Window contact for customers • Sports contract • Transcriptions/Radio, DVD/tapes of DWI arrests for courts • siren activation (not all communities) for Preston, Canton, Peterson, & Waylen • Enter warrants from the courts • Enter all ICR (CJIS) • Some state patrol dispatching • Page for anyone in the 867 prefix.
Freeborn	• Freeborn Co. Sheriff • Alden PD • Albert Lea PD • Freeborn Co Jail Transport • DNR & State Patrol	• City of Albert Lea FD • Albert Lea Township FD • Alden FD • Clarks Grove FD • Conger FD • Emmons FD • Freeborn FD • Geneva FD	• Mayo Clinic Health Systems • Albert Lea • Freeborn • New Richland • Gold Cross Ambulance, • Blooming Prairie • Lake Mills (Iowa)	• Public Health • Environment Services • County Highway • City Public Works • Emergency Management • Walk up window • Video visitation

Agency	Law	Fire	EMS	Other
County				
Freeborn (Continued)		• Hartland FD • Hayward FD • Hollandale FD • London FD • Manchester FD • Myrtle FD • Twin Lakes FD		
Houston	• Houston County Sheriff • La Crescent PD • Hokkah PD • Houston PD • Caledonia PD • Spring Grove PD	• La Crescent FD • Hokkah FD • Houston FD • Caledonia FD • Spring Grove FD • Eitzen FD • Brownsville FD	• Houston • Caledonia • Spring Grove • New Albin Fire & Ambulance	• Backup jailer for the entire jail • Genoa Nuclear plant (decommissioned) code red • Siren activations • One court security • Courts logistics • Reverse 911 • Dispatcher controls elevator, sally ports, doors, etc. • Communication with Highway Dept (won't dispatch) & Environmental Services
Mower	• Mower County Sheriff • Austin PD • City of Adams PD • Browns Dale PD • Lyle/Mapleview PD • Grand Meadow PD • Contract services for Leroy	• Maple view FD • Browns Dale FD • Grand Meadow FD • Leroy FD • Adams FD • Lyle FD • Austin FD • Dexter FD	• Adams • Leroy • Grand Meadow • Austin (Gold Cross)	• County & City Attorneys • Human Services • Back ground checks for City of Austin & Housing & Redevelopment • Posse • Police Reserves (shared) • DNR & State Patrol • Community Service Officers, includes animal calls • Military & Volunteer background checks • Finger prints • Jobs for schooling & adoptions • Admin support
Olmsted	• Olmsted Co. Sheriff • Rochester PD Outside county: • Chatfield to Fillmore • Goodhue to Pine Island.	• Byron FD • Stewartville FD • Rochester FD • Hayfield FD • Chatfield FD • Elgin FD • St. Charles FD • Zumbro Falls FD • Pine Island FD • Oronoco FD • Dover FD • Eiota FD	• Chatfield • Eiota • Elgin • St. Charles • Gold Cross • Pine Island • Stewartville • Byron	• Page County Coroner • Court Security • Warrant Confirmation • Security camera at front door • Direct line ring down from all 5 fire stations, IBM, Airport, & Public Utilities

7.3 Management and Organization

The restructuring of the current PSAPs to create a four center model will change the proximity, availability and relationship between the communications personnel and the current Sheriff's Office, Local Police, and to some extent Fire and EMS Service personnel. Depending on the final locations of the new centers there will be certain customers that no longer house a communication center. Reportability of the Communications Center organization structure is an important consideration to the creation of the new model of providing dispatch services for the region. To help assure that all counties involved in a dispatch consolidation receive a comparable level of services there are advantages to having the centers report through a new management level position to a new joint powers board structure. The JPA membership should be representative of all participants in the PSAP. Section 8 of this report discusses Governance Structure options in more detail. For the two center consolidation scenario, the option of a host agency – fee-for-services model is less likely to be an accepted or appropriate means of managing the new centers. The organization chart shown below and in Figure 9 reflects the JPA model of governance. Regardless of the governance model chosen in the 2-center consolidation option, it is recommended to include a dedicated Communications Center Manager and additional Shift Supervisor positions. The advantages of this new management structure include:

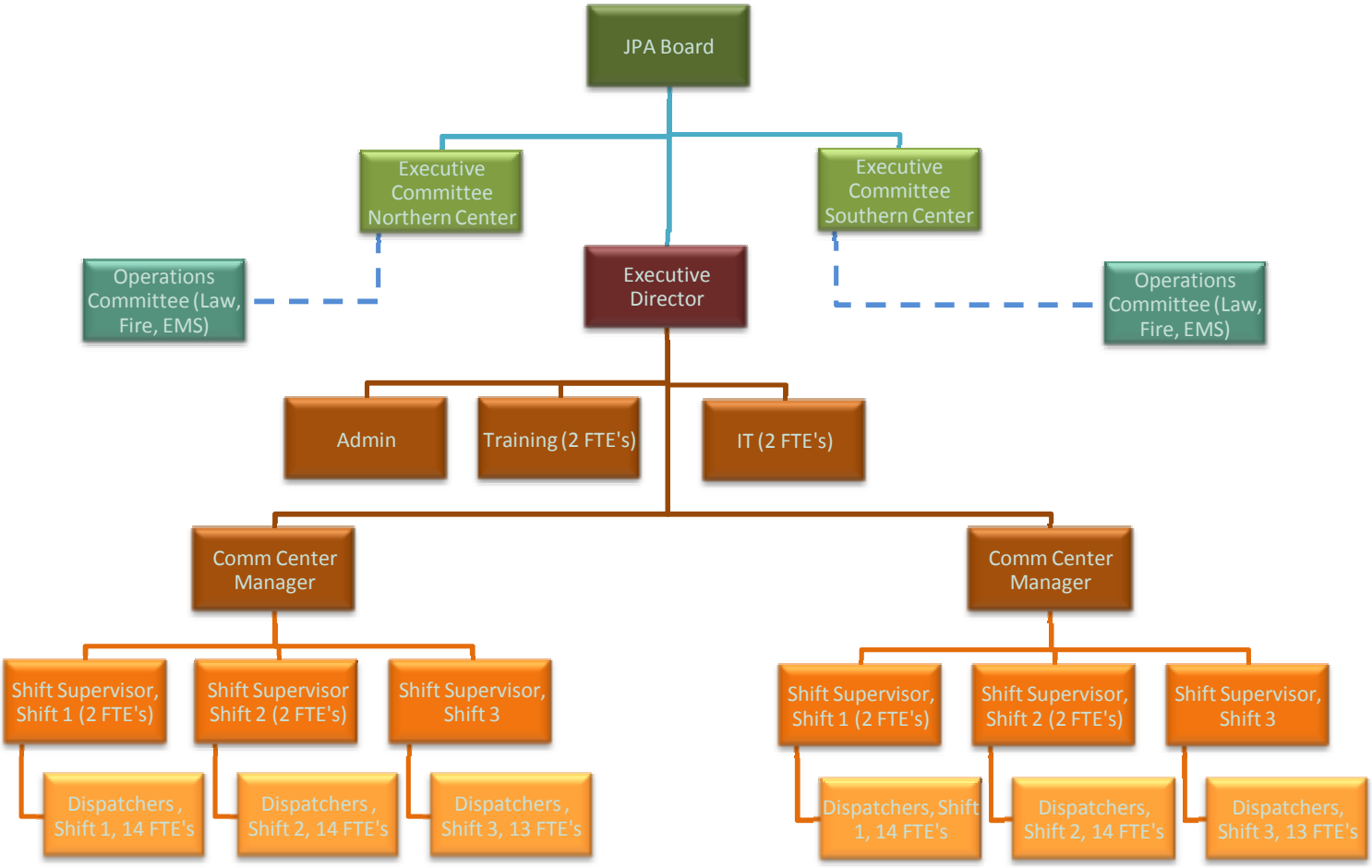
- Increases potential to establish uniform work processes within the PSAP and within the region.
- Creates a more even distribution of work load within the PSAPs.
- Concentrates work force to provide support (dispatchers can assist each other when they are all located in one location).
- Limits potential for differing levels of service based on county relationship and physical proximity.
- More focused accountability for communications function.

The organization…

Southeast PSAP Consolidation, Two Centers, North/South Organizational Chart

- Northern Center: Dodge, Goodhue, Rice/Steele, Wabasha, and Winona Counties, 47 FTE's
- Southern Center: Freeborn, Fillmore, Houston, Mower and Olmsted Counties, 47 FTE's
- Shared FTE's: 6 (1 Admin, 2 Training, 2 IT and 1 Director) for a total of 100 FTE's

Figure 9 – Sample Organization Chart, Two Center Option



Within each of the new centers the proposed staffing plan will include a Communication Center Manager that will report to an Executive Director that manages both centers. The Communication Center Manager will be responsible for all aspects of the PSAPs operations, staffing, and delivery of services. The plan provides for three Radio Communication Supervisor positions and 41 Radio Communication Operators for each PSAP. Because of the autonomous nature of a stand-alone PSAP that is not able to rely on a host agency for typical overhead support services in house, this plan proposes the addition of shared region wide support services with one administrative support staff position, two training staff positions and two information technology staff position for the region. Other support services, such as legal, fiscal and human resources would most likely be received through contractual arrangements from a participating member or private entity. The staffing level recommended for the 2-center PSAP consolidation is shown in the Table 23. The staff levels were determined using a traditional approach to building a staffing estimate for a consolidated center that projects staff need based on current center work load (measured volume or calls, dispatches, and records created) known as the Erlang C staffing model. The Erlang C is a traffic modeling formula used in call center scheduling to calculate delays or predict waiting times for callers. Erlang C also calculates the resources that will be needed to keep wait times within the call center's target limits. The Erlang C traffic model estimates how many dispatchers are needed in a call center.

These computational recommendations were then compared against real world data to determine if the recommendation is appropriate. A comparison was made against four known call centers with similar characteristics. Two different metrics were used for the comparison; total population serviced and total annual call volume processed. Research was done to collect data from 12 different active dispatch centers ranging in size, population, and activity level. The complete PSAP Benchmark Comparison Table is included in Appendix A. The comparisons offered a check and balance approach to the calculation methods, and some reassurance of accuracy for the proposed staff level recommendations. Table22 provides base line call volume and staffing data provided by each or the 10 PSAPs in the region. The tables also project staffing estimates for dispatcher staff levels to accommodate the aggregate call volumes for potential future PSAP configurations and the comparison to existing centers with staff counts for these actual operational centers.

Table 22
Staffing Benchmark Comparison Tables, Two Center Option

2 Center, North/South					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
North	240125	520450	66.45	50.4	Washington Co.	238136		31	45.25	
					Anoka	330844		42		
					Anoka		307700	42		
					DCC		300451	66		

(North = consolidation of Dodge, Goodhue, Rice/Steele, Wabasha & Winona Counties)

2 Center, North/South					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
South	254559	477289	61.75	50.4	Washington Co.	238136		31	44.00	
					Red River	208777		37		
					Anoka		307700	42		
					DCC		300451	66		

(South = consolidation of Freeborn, Fillmore, Houston, Mower, & Olmsted Counties)

The number of employees available to staff a center, the number of dispatch positions actively staffed at any one time, the number of supervisory staff, and the availability of staff to support unexpected events all play a role in the level of service provided by a center. Events such as disasters and large emergencies require a larger pool of staff to sustain PSAP operations through a crisis. Staffing levels and staff performance will impact levels of service during the restructuring transition and the ongoing levels of service provided from each current PSAP. Staffing considerations will also have a significant impact on the cost of the restructuring effort.

Table 23 summarizes the two consolidated PSAPs showing the recommended staffing models for each PSAP. The Erlang C modeling used to prepare these calculations includes the following information based on the 2010 calendar year:

- Actual 2010 Total Calls (incoming 911 and admin)
- Estimated Radio Traffic
- Estimated CAD Records

Assumptions:

- Average work week = 35.5 hours, average work year = 1,846 hours.
- 8,760 staff hours required to fill one position 24 hours a day, 365 days per year
- Minimum of two dispatchers on Duty at all times (17,520 staff hours)
- 2,920 staff hours required to fill one position 8 hours a day, 365 days per year

Table 23
Proposed Staffing Models, Two Center Option

										Dispatch Shift Allocation				On-Duty Dispatch Avg.		Average Supervisory daily coverage(hours)
2 Center Model	Total FTEs:	Director	Training/ Quality Assurance	Manager	Admin	I/T	Superv.	Dispatchers		Shift 1	Shift 2	Shift 3				
Shared	6	1	2		1	2										
North	47			1			5	41		14	14	13		8.6		1
South	47			1			5	41		14	14	13		8.6		1
Totals:	**100**	**1**	**2**	**2**	**1**	**2**	**10**	**82**		**28**	**28**	**26**				
North: Dodge, Goodhue, Rice Steele. Wabasha & Winona. South: Freeborn, Fillmore, Houston, Mower & Olmsted.																

This plan proposes that existing personnel in the current southeast PSAPs will be encouraged to relocate to the new consolidated centers. The dispatchers from each represented county would come with different starting salaries and benefits. The cost estimates in this plan allow for Average Salary levels based on the highest average from the perspective joining centers. Governance and transition planning will need to establish baseline benefits such as base salary range, benefits, seniority and any other related issues. Even if employment at the newly created PSAP will represent a new employment relationship, consideration will need to be given to establishing a relationship between tenure and compensation and benefits for transitioning staff. The goals established by the PSAP Study Group called for policies that provide, at a minimum, parity, as well as an improved opportunity for employment as to what exists for the current PSAPs for each participating county. For staff that chose not to relocate to the new consolidated center, the participating agency PSAP will use existing contract allowances such as encouraging severance and retraining benefits.

7.4 Product and Service Description

The two PSAPs in this scenario will operate 24 hour per day, 365 days per year. The services provided by the two centers will replicate as much as practical the services currently provided from the 10 current PSAPs in the region. There will be some administrative telephone calls and peripheral agency specific administrative work that the current PSAPs perform that is not done from the new consolidated centers.

The primary services provided from the two PSAP configuration will include:

- E-911 call taking / call transfers
- Emergency responder radio dispatching (police, fire, EMS)
- Notification of other emergency responders not dispatched by PSAP. (private ambulance, mutual aid agencies)
- Monitoring of radio traffic / coordination of field personnel
- Creation and updating of CAD system records
- Roll over telephone support for local PD and Fire stations for after hours calls
- Reverse E-911 public notification
- Warning siren activations

- Retrieval of logged audio records for courts
- Monitoring of building alarms
- Monitoring of security cameras
- Participate in agency policy and process decision making
- Provide information to local businesses (Call Tree / Key holder)
- Requesting Tow services
- Coordination with impound lot
- Coordination with local EOCs and emergency management
- Systems alarm monitoring (ARMER)

A listing of services provided by the current centers that would not be included in the consolidated PSAP includes:

- Administrative call taking*
- Customer window information requests
- Backup support for jail operations
- After hours building access or facility monitoring

The services provided by the PSAP should be well defined and documented in Customer Service Level Agreements that accompany any contract or Joint Powers governance model. The * listed above references that administrative calls currently make up a significant percentage of call volume and activity for the individual PSAPs. The staffing levels determined by the Erlang C Model and the subsequent comparisons with real world PSAPs suggest that a determination of how administrative call traffic is supported in a consolidated environment will have a bearing on staffing requirements and may alter the staff levels reflected in this Business Plan.

7.5 Technology Considerations

The migration from 10 PSAPs in the Southeast Minnesota region to two consolidated PSAPs will require a Capital investment in technology upgrades, relocation, and integration. Attention to technology requirements and establishment of a goal of uniformity and compatibility of technologies used within the geographic jurisdiction of each of the four centers is important. This plan strives to assure the new centers operate effectively, adequately support the demands of consolidated operations, meet industry standards and best practices, and prepare for the necessary expansion of systems and technologies.

There will continue to be some variation in the technologies deployed among the two PSAPs based on the unique nature of the counties they currently serve and the differing system elements that have been deployed in different PSAPs throughout the southeast region. The primary systems considered for migration to the new two center configuration include:

- Next Generation E-911 telephone system.
- Multiple position radio dispatch workstation with multiple channels and multiple speaker configurations (number of positions is dependent on staff levels and is identified in the Facility planning section 5.xx)
- A uniform computer aided dispatch system and records management system (CAD / RMS) connected to multiple remote users.
- Monitors, displays, and servers

- 911 and radio call recording systems
- Supporting mobile data infrastructure
- Supporting radio system infrastructure (ARMER, Legacy VHF, Legacy Paging)
- Local and Remote Video Security Systems

The new consolidated PSAP Centers will require the standardization of CAD systems and need to choose a single system for each center. Except for Rice/Steele, all the Counties in the Northern Center all have CIS for their CAD systems which can be fiscally advantageous and from a personnel comfort level perspective. However, the system would need to be evaluated and upgraded ensure that it has the functionality necessary for a larger consolidated PSAP.

The spreadsheet in Table 24 shows current CAD features used by each county and what would be required in a consolidated PSAP.

Table 24
Current CAD Systems and Options Comparison Tables, Two Center Option

2 Center Option: North PSAP, Current CAD Systems

CAD	Dodge (CIS)	Goodhue (CIS)	Rice/Steele (LOGIS)	Wabasha (CIS)	Winona (CIS)	Consolidate PSAP Required CAD Features
911 ANI/ALI Interface	YES	YES	YES	YES	YES	Required
State/NCIC Interface	YES	YES	YES	YES	YES	Required
Other Interfaces (MDC)	YES, GIS Mapping	YES	NO, RMS is shared among LOGIS subscribers.	NO, MDC	NO	Required
Alphanumeric Paging	YES, VHF	NO, Not via CAD	YES, Separate from CAD	NO, Consoles	YES	Required
Automatic Vehicle Location	NO	YES	YES	NO	NO	Required
Emergency Medical Dispatch	NO	NO	NO	NO	NO	Not Required
Fire Mobile Data	NO , Can Fax map, quick send	NO	NO	NO	NO	Not Required
Fire Station Alerting	NO	NO	NO	NO, VHF paging, agency incident log	NO	Not Required
Fire/EMS Records Management	Not Used	YES, Track basic ICR	YES	YES, ICR	YES	Required
Mobile Mapping	NO	YES	YES	YES	YES	Required
Police Mobile Data	YES, Air card	YES	YES	NO	YES	Required
Police Field Reporting	YES, From computer in squad car	YES, Use CIS via Citrix	YES	YES, Partial, word processing only	YES	Required
Police Records Management	YES	YES	YES	YES	YES	Required
Radio Console/System – Push-to-Talk/Emergency	NO	Yes	NO	NO	NO	Required
Rip & Run	NO	NO, Have capability, not used	YES	NO	YES	Required
TDD/TTY	NO	NO, Not in CAD (it's on the phone)	YES	YES	NO	Required

* Houston County does not use CAD but has RMS Police Central for ICR and jail information.

Table 24 (Continued)

2 Center Option: South PSAP, Current CAD Systems

CAD	Freeborn (CIS)	Fillmore (TAC 10)	Houston (No CAD *)	Mower (Positron Intrado)	Olmsted (New World Systems)	Consolidate PSAP Required CAD Features
911 ANI/ALI Interface	YES	N/A	N/A	YES	YES	Required
State/NCIC Interface	YES	N/A	N/A	YES	YES	Required
Other Interfaces (MDC)	YES	N/A	N/A	YES, Portal Records Access	YES	Required
Alphanumeric Paging	NO	N/A	N/A	YES, Radio Console	YES	Required
Automatic Vehicle Location	YES - Albert Lea Only	N/A	N/A	YES	YES	Required
Emergency Medical Dispatch	NO	N/A	N/A	NO	NO	Not Required
Fire Mobile Data	NO	N/A	N/A	NO	YES	Required
Fire Station Alerting	YES	N/A	N/A	NO	NO	Not Required
Fire/EMS Records Management	NO	N/A	N/A	YES	YES	Required
Mobile Mapping	YES	N/A	N/A	YES	YES	Required
Police Mobile Data	YES	N/A	N/A	YES	YES	Required
Police Field Reporting	YES	N/A	N/A	YES	YES	Required
Police Records Management	YES	N/A	N/A	YES	YES	Required
Radio Console/System – Push-to-Talk/Emergency	YES	N/A	N/A	YES	YES	Required
Rip & Run	NO	N/A	N/A	NO	YES	Required
TDD/TTY	YES	N/A	N/A	YES	YES	Required

The new designated PSAP Center will have to obtain several files including, but not limited to, GeoFiles, Master Name Files, Incident History Files and others, from the Counties that will be consolidated. For Counties like those in the Northern Center that have the same CAD software, this is as simple as updating the file with the area to be dispatched and does not involve file conversions. It most likely will involve data entry work on the consolidated PSAP's CAD program.

For the consolidated counties that have different software (as in the South Center), a standardized CAD program will need to be chosen and file conversions done to get the data into the consolidated PSAP's CAD system. Selection of a CAD system that already exists for one of the current PSAP facilities will reduce file conversion costs.

Dispatcher Radio Console systems are used to communicate with field personnel and other agencies. In many PSAP Centers, the radio console system interfaces with the CAD system to provide the dispatcher with the identification of radios/units calling to enhance communications. The consolidate PSAP will most likely be part of the Minnesota State ARMER system. Currently only two (2) types of radio consoles have been approved for peer level connection to the ARMER system backbone, the Motorola Gold-Elite and the MCC 7500. Motorola announced the intent to cancel the Gold-Elite consoles with the last order date of September 30th, 2011 and the last ship date of December 31st, 2011. Table 25 shows

the type of console systems each county currently has in their dispatch centers. Freeborn, Houston, Rice/Steele, Wabasha and Winona have all upgraded or are in the process of upgrading to the MCC 7500 Console. Dodge, Fillmore and Goodhue are currently using the Motorola Gold Elite. Mower has an Orbicom Console and is the only Southeast County using a non-Motorola console. Mower is also the only county in the southeast not on the ARMER system.

Table 25
Current Dispatch Console Systems Comparison, Two Center Option

2 Center Option: North PSAP, Current Radio Console System					
County	Dodge	Goodhue	Rice/Steele	Wabasha	Winona
Radio Console	Motorola Gold Elite	Motorola MCC 7500	Motorola MCC 7500	Motorola MCC 7500	Motorola MCC 7500
2 Center Option: South PSAP, Current Radio Console System					
County	Freeborn	Fillmore	Houston	Mower	Olmsted
Radio Console	Zetron, MCC 7500 to be installed	Motorola Gold Elite	Motorola MCC 7500	Orbicom	Motorola Gold Elite

7.6 Facilities / Physical Space

Creation of the North and South PSAPs will provide the opportunity to create new work spaces for those sites. None of the current PSAPs has adequate space to expand to accommodate the additional staff and work stations required of a consolidated PSAP. The minimum requirement for each PSAP is 20 operator positions. One proposed PSAP layout configuration is shown in the following diagram.

Staffing considerations, back up capabilities, and future expansion needs the primary criteria that drive space requirements of the Consolidated PSAP facility. Other primary considerations for the facility include its geographic location and proximity within the region serviced; the capacity and robustness and resiliency of buildings electrical, mechanical, and communication systems; physical security of the center, the potential for related uses such as regional Emergency Operations Centers or regional training facilities.

Creation of the two regional PSAPs will provide the opportunity to create new work spaces for both sites. None of the current centers has expansion space in on their current dispatch floor to accommodate the number of staff or associated work stations in their current centers without some level of remodeling or expansion of current facility. There are, however, several opportunities to create adequate space by expanding within some of the existing centers, occupying adjacent spaces and upgrading to accommodate the additional staff and work stations required of the new 2-center PSAP configuration.

PSAP facilities are staffed 24/7 to provide continuous public access to the agencies. Physically consolidation PSAPs will require new or modified PSAP facilities. Table 26 summarizes facilities requirements for each consolidated PSAP in the two center option. The square footage is driven by the number of call taker and dispatcher positions that were developed using the Erlang C model based on workload information provided by the existing PSAPs.

Table 26
Facility Space Requirements Recommendation, Two Center Option

	Work Stations *	Executive Directors Office	Comm Center Managers Office	Dispatch Supervisors Office	Break Room/Kitchen	Conference Room	Admin Office/Copy and File Room	Equipment Room*	Equipment Repair and Maintenance Room	Locker Room	Bath Rooms and Showers	Public Bath Rooms	PSAP Sq Ft Sub Total	Building Circulation 15%	Building Services 10%	Gross Building Square Feet
2 Centers																
North																
Quantity	21	1	1	1	1	1	1	24	1	1	2	2				
Size (sq ft)	150	150	150	150	400	300	150	25	300	500	400	100				
Total:	3150	150	150	150	400	300	150	600	300	500	800	200	**6850**	1028	685	**8563**
South																
Quantity	21	1	1	1	1	1	1	24	1	1	2	2				
Size (sq ft)	150	150	150	150	400	300	150	25	300	500	400	100				
Total:	3150	150	150	150	400	300	150	600	300	500	800	200	**6850**	1028	685	**8563**

* Assumptions:
- Ops floor square footage calculated at 180 sq ft per work station.
- Equipment Room calculated at an average of 25 sq ft per rack.

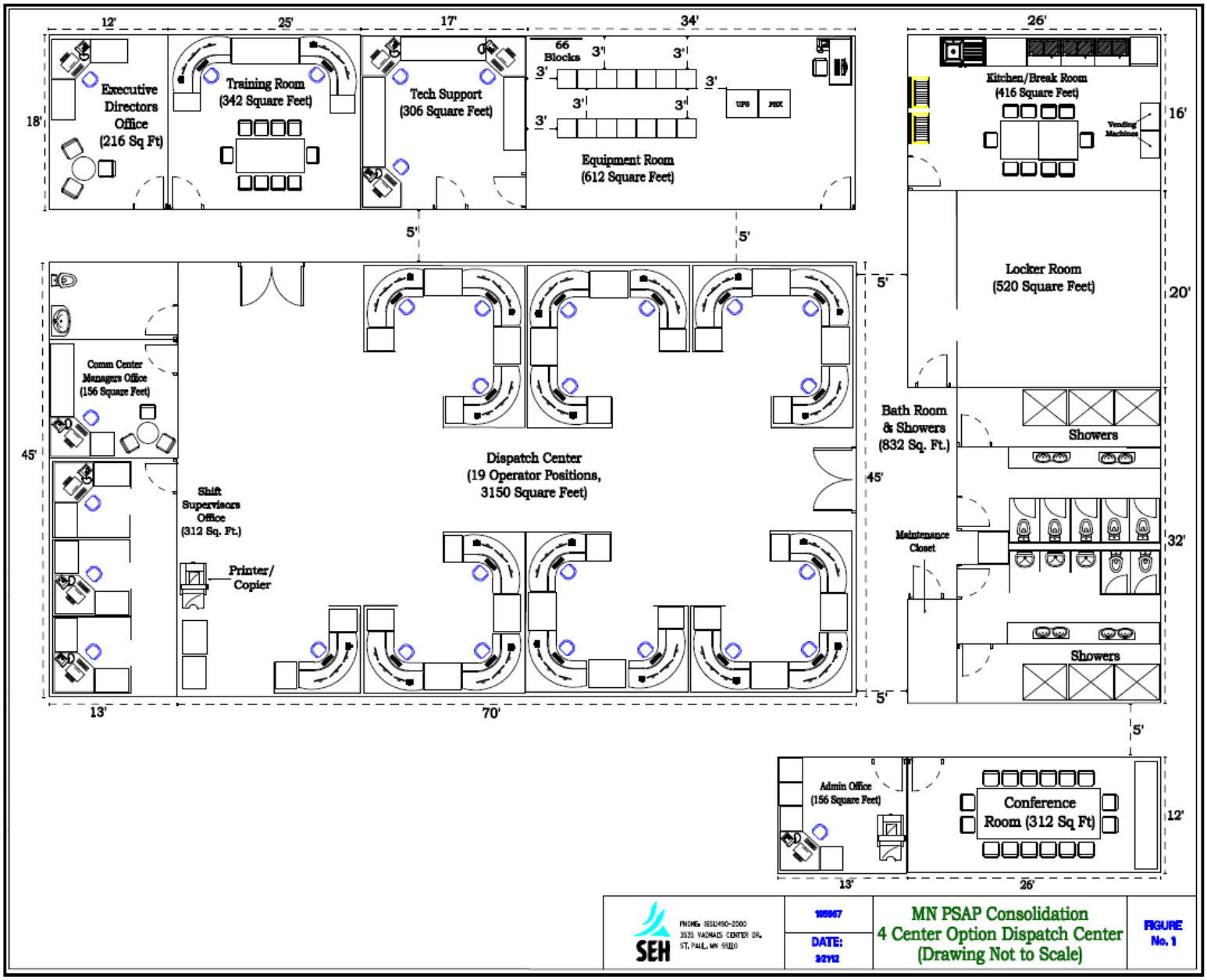
The sites that offer possible space for expansion of existing space to accommodate one of the consolidated PSAPs include;

(NOTE: For discussion)

- Goodhue County; expand the current PSAP into the adjacent EOC/ Conference room space. (3545 Sq feet available for expansion)
- Wabasha County, expand the current PSAP into adjacent storage and clerical space (2010 Sq feet available for expansion)
- Pearl Street - Rice/Steele County, relocate PSAP and expand into facility lower level conference room, office and locker room space. (4035 Sq feet available for expansion)
- Freeborn County; expand current PSAP into adjacent records / finance office space. (1911 Sq feet available for expansion)

One proposed PSAP layout configuration is shown in the following diagram.

Figure 10 – Sample Consolidated PSAP Layout, Two Center Option



7.7 Two Center PSAP Consolidation Migration and Operational Cost Estimate

The migration from 10 centers to a new configuration of two consolidated PSAP dispatch centers will require an initial investment in facilities remodeling and expansion, staffing relocation, and new technology implementation. The operation of the two centers will also have continuing operating costs. The estimated project costs listed below are derived from several sources including 2010 SE MN PSAP operating budget figures, Office of Enterprise Technology and Qwest estimates of telecommunications costs, and SEH estimated technology system and hardware costs.

Table 27
MN Southeast PSAP Consolidation Project, PSAP Cost Comparison Options
2-Center Option: North - South

Northern Region

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) {.5*1/5+.25*Pop+ .25*Vol}
Rice/Steele County	100,718	41.9%	622,729	33.7%	21.00	$1,377,889	$65,614	$1,829,732					$1,749,145	$1,405,450	$1,205,668
Goodhue County	46,183	19.2%	416,040	22.5%	12.00	$760,567	$63,381	$897,699					$802,049	$938,970	$852,274
Wabasha County	21,676	9.0%	202,298	10.9%	11.00	$675,621	$61,420	$722,608					$376,442	$456,571	$625,272
Dodge County	20,087	8.4%	164,785	8.9%	9.20	$448,008	$48,697	$493,008					$348,846	$371,907	$597,208
Winona County	51,461	21.4%	441,883	23.9%	13.25	$804,594	$60,724	$864,886					$893,711	$997,295	$889,771
Total	**240,125**	**100.0%**	**1,847,735**	**100.0%**	**66.45**	**$4,066,679**	**$59,967**	**$4,807,933**	**50**	**$3,280,688**	**$889,505**	**$4,170,193**	**$4,170,193**	**$4,170,193**	**$4,170,193**

Southern Region

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) {.5*1/5+.25*Pop+ .25*Vol}
Olmsted County	144,248	56.7%	714,716	43.0%	25.00	$1,918,485	$76,739	$2,105,006					$2,597,423	$1,972,355	$1,600,820
Freeborn County	31,255	12.3%	110,997	6.7%	10.00	$422,220	$42,222	$710,738					$562,798	$306,311	$675,653
Mower Count	39,163	15.4%	476,479	28.7%	10.75	$649,749	$60,442	$741,231					$705,194	$1,314,908	$963,401
Fillmore County	20,866	8.2%	198,786	12.0%	7.00	$350,000	$50,000	$378,000					$375,727	$548,577	$689,451
Houston County	19,027	7.5%	160,023	9.6%	9.00	$494,514	$54,946	$522,314					$342,613	$441,605	$654,430
Total	**254,559**	**100.0%**	**1,661,001**	**100.0%**	**61.75**	**$3,834,968**	**$56,870**	**$4,457,289**	**50**	**$3,836,970**	**$746,785**	**$4,583,755**	**$4,583,755**	**$4,583,755**	**$4,583,755**
										$7,117,658	$1,636,290	$8,753,948			

Region 10 Center TOTAL =	**$9,265,222**	**Region 2 Center Total =**	**$8,753,948**

Possible Annual Savings ** =	**$511,274**

** Savings does not account for cost of staff or services retained by existing agencies for administrative or non-dispatch associated tasks.

Table 28
Estimated Migration and Operational Costs, Two Center Option

Physical Space/Remodel Costs	Estimates Capital Costs (3 Sites , No change at Olmsted)	Estimated Annual Operational Costs (4 Sites)
Remodel Cost @ $85 / sq ft. includes the following: (8563 sq ft @ 2 sites)		
Dispatch Center		
Supervisor Offices		
Equipment Room		
Raised Flooring		
Electrical		
Security		
Generator / UPS		
Sub Total:	**$ 1,455,710**	
Staffing	**Estimates Capital Costs**	**Estimated Annual Operational Costs**
Relocation Costs	(TBD)	
Staffing (assuming high average)		$7,117,658
Other		
Sub Total:	**(TBD)**	**$7,117,658**
Technology	**Estimates Capital Costs (4 Sites)**	**Estimated Annual Operational Costs (4 Sites)**
Center Technology Costs:		
New MCC7500 IP Radio Consoles & Equipment for 14 positions	$1,120,000	
Dispatch Console Furniture (15)	$840,000	
Digital Logging Recorder Upgrades	$400,000	
E - 911 Phone System Upgrades	$400,000	
Geographic Information System (GIS) Integration	$400,000	
CAD system upgrades / Integration	$750,000	
Mobile Data Systems w AVL/GPS (Wabasha, Dodge, Fillmore, Houston)	$1,000,000	
Backup Systems	$200,000	
Relocate Existing Center Electronics	$200,000	
Connections to Legacy Systems	$300,000	
Repairs, Alterations, Maintenance and other Operating Costs (based on existing Maintenance costs + 20%)		$1,636,290
Sub Total:	**$5,610,000**	**$1,636,290**
4 Center Option Grand Total:	**$7,065,710**	**$8,753,948**

Original 10 Center Ops Cost = $ 9,265,222

Delta = 511,274

Estimated Payback = 13.8 years *

NOTE: Operations cost savings do not account for cost of staff or services retained by existing agencies for administrative or non-dispatch associated tasks.

8.0 Governance and Cost Distribution Options

Whenever two or more organizations determine that it is in their best interests to jointly provide PSAP services, it is important that they establish a framework that will guide policy/governance, financial arrangements, service levels and other terms and conditions required to manage and operate the PSAP. A well thought out and properly constructed governance agreement will clarify roles and relationships, define the authority of staff and governance members and provide a process to resolve conflicts or disputes.

This document is intended to identify the general options for consideration by the study group. Every option has multiple variations and ultimately, the participants will weigh and balance the attributes of each option and then determine a model which best fits the specific needs of the new PSAP organization.

8.1 Elements of Governance

Regardless of what governance model is adopted, there are several key elements that should be considered for incorporation in the model. The following list represents common elements found in shared services agreements. Local concerns may require additional elements be included:

- Composition of the governing board, if applicable.
- Budget development process, operating and capital.
- Membership requirements, if JPA model.
- Establishment of standing committees.
- Ownership of equipment and technology.
- User input and complaint process.
- Operating procedure review and adoption process.
- Governing board span of authority and control, if applicable.
- Budget approval process.
- Term of agreement, including minimum term at start-up.
- Withdrawal procedure, including responsibility for debt.
- Cost allocation method to include review and modification process
- Authority of the PSAP Director.

8.2 Primary Governance Models

Three broad options exist for PSAP governance in a consolidated environment. In the discussion below each option is described with the major positive and negative attributes.

1. Operating division within the structure of a participating government. In this model, the PSAP operates independently of the public safety agencies that it serves. The PSAP director functions as a department head, reporting to the same position as other department heads. Ramsey County, MN is an example of this model.

   Positive attributes:

   - May overcome the perception of preferential treatment/prioritization towards a single agency that would exist if services were provided by a participating agency.
   - More insulated from political pressures that may arise if director reports to governance board.

- Independent leadership allows the director to manage PSAP resources in order to provide equitable services to all participating agencies.
- May include a user board to provide advisory input to the management team.
- As a civilian agency, the PSAP will offer a career path to PSAP staff.
- The director is likely a PSAP career professional as opposed to a member of a participating agency who has been assigned the position on a rotating or temporary basis.
- The PSAP will have access to the institutionalized support services of the hosting organization such as facilities, human resources, legal and I/T.

Negative attributes:

- Perceived loss of operational control by participating agency staff.
- Civilian Director may cost more than a sworn supervisor.

2. PSAP managed by a participating agency. In this model, which has been the dominant model to date, the PSAP is operated by a participating law enforcement, fire or EMS agency. There is often a non-sworn PSAP manager who reports to a sworn supervisor, commander or depending upon agency size, the Chief.

Positive attributes:

- The cost of a civilian director may be avoided, lowering operational costs.
- The PSAP will have access to the institutionalized support services of the hosting organization such as facilities, human resources, legal and I/T.
- May include a user board to provide advisory input to the management team.
- Buy-in may be increased with more familiar management structure.

Negative attributes:

- Agencies which are closing their PSAPs will need to adjust to the loss of direct control of the PSAP operation and staff.
- Participating agencies may perceive that the host agency is receiving a higher level of service.
- Without carefully crafted agreements on user input and dispute resolution, the PSAP may become the focus for political infighting. Users must feel that their concerns are heard.
- More limited career paths for PSAP personnel as upper PSAP management is likely to be sworn agency staff.

3. PSAP organized and managed through a Joint Powers Agreement. In this governance model, the consolidated PSAP is not part of a larger agency or government structure, but exists as an independent entity headed by a civilian director. The director traditionally reports to a board comprised of representatives of the participating members. Examples of this model include the Rice-Steele Consolidated Communications Center and the Dakota Communications Center in Dakota.

Positive attributes:

- Independent leadership allows the director to best manage PSAP resources and provide equitable service to all participating agencies.

- Offers a developed career path for PSAP staff as civilian personnel generally fill supervisory and management positions.
- A degree of neutrality in that it is independent of law enforcement, fire or EMS. This neutrality allows the PSAP to provide equal service to all participating agencies and avoid the perception of bias or favoritism.
- Total organizational and single mission focus on PSAP services without resource competition. .

Negative attributes:

- Since the PSAP is not part of a larger municipal entity, real and intangible costs for support services such as computer/network services, human resources, and facilities are perceived to be higher and in fact may be more transparent. A poorly crafted governance structure can result in a director that has to answer to multiple bosses. This situation can be untenable for the director and can prevent the director from effectively managing the PSAP.

Political infighting among the participating agencies can impact the PSAP and/or entities represented on the oversight board. Although initially all agencies and entities may agree on the direction for the PSAP, over time, as the people and political agendas change, the PSAP can become the focus of political disputes. This structure requires a carefully crafted governance agreement to protect the PSAP from the impact of political disputes. Such an agreement will ensure that the PSAP can focus on its primary mission.

8.3 Cost Allocation

In any operation shared by two or more entities, the allocation of operating and capital costs has the potential to be the most contentious issue for the stakeholders to resolve. While all participants agree that the cost allocation must be fair, the judgment of fairness can be very subjective and very much in the eye of the beholder. While we will stop short of providing a recommendation on a cost allocation model for the consolidation under study, we will provide a high level overview of common methods in use today.

1. Usage Based. Usage based systems attempt to connect costs to the workload that each participating entity actually creates for the PSAP. Common examples are 9-1-1 calls or assigned CAD events attributable to each member.

   Positive attributes:

   - Connects each member's costs to the actual work load their service area generates for the PSAP.
   - Easy to administer, assuming availability of reliable records at PSAP.

   Negative attributes:

   - Member costs may fluctuate as a result of major incidents such as natural disasters. (Some PSAPs have established longer measurements intervals such as a 3 year rolling average to overcome this issue).
   - Selected activities may not be the most accurate measure of work-load.
   - Start-up statistics may not be comparable between jurisdictions due to differences in procedures, definitions and technology.

2. Population Based. Contribution rates for each member are based upon the census population data for that jurisdiction.

   Positive attributes:

   - Easy to administer. Based upon readily available information.
   - Population component tends to provide some stability even when activity fluctuates.
   - Property value introduces ability to pay into formula.

   Negative attributes:

   - Does not incorporate transient or seasonal populations.
   - Population is not always the most reliable gauge for demand on public safety services. Regional attractions, transportation corridors, major event venues or other factors unique to a particular community may impact demand more than the population total.

3. Hybrid model. The PSAP is funded through a combination of factors. PSAP usage, property values and population are common factors.

8.4 Organizational Models

While there are still several consolidation scenarios under consideration for the Southeast Minnesota region, the study group should begin the discussion of the organizational model which would best serve the consolidation. The following organizational options are offered as a starting point for this discussion.

1. Single Regional PSAP authority- Governance of all SE Minnesota regional PSAPs, regardless of number or location. Because of the number of jurisdictions involved, this model would most likely be organized as a Joint Powers entity, although in theory the group could determine that a member entity could manage the service on a fee-for-service basis. The major attributes of this model include:

   - Standardized equipment & technology
     - Single set of technical systems, centralized hosting.
     - Clustered technology.
   - Standardized operating procedures and policies
     - Benefit to interoperability across PSAP lines within region.
     - Equitable service levels across larger service area.
   - Unified personnel system.
   - May simplify back-up procedures if multiple PSAPs are established.
   - Perceptions of unwieldy, cumbersome management processes.

2. Autonomous Centers – Independent PSAPs with no shared governance beyond PSAP service area.

   - Each center has its own governance system as determined by participating entities. Could be any of the three options or variations described in the governance section.
   - Retains many benefits of consolidation.

- May provide a greater sense of local control and decision making than a single PSAP authority.
- Operating procedures and policies more customized.
- Interoperability with other PSAPs in region may be more challenging if procedures are less universal throughout region.
- Back-up and redundancy capabilities within the broader region would be dependent upon the level of cooperation and planning between the centers within the region.

3. Participating entity PSAP management – Contract for services relationship.
   - Negotiated cost allocation and service levels.
   - Performance management is provided through host agency processes.
   - User input mechanism can be established in user agreements or handled informally.

The organizational model chosen for the region will influence the governance and cost allocation decisions that follow. The study group may need to establish a governance subcommittee to develop recommendations for consideration of the larger group. Once the study group has reached agreement on organization, governance and cost allocation, participating jurisdictions will need to review and ultimately consider approval. Reaching a final agreement review the agreement and suggest modifications.

9.0 Finance Options

Public safety communications agencies considering major upgrades in equipment, staffing or looking at consolidations have sought ways to obtain funds, many with grants or financial assistance from government agencies.

9.1 Funding Options

The "911 Fee". Residents contribute through taxes to E-911 Communications. Minnesota law requires all wireline and wireless phone providers to collect a "911 Fee" for each line of service. A portion of that fee collected under this law must be used to fund implementation, operation, maintenance, enhancement, and expansion of enhanced 911 including acquisition of necessary equipment. The "911 Fee" was the most common funding source but with declining wireline usage and rapidly emerging technology it is not keeping up with rising costs.

Municipal Services Taxing Unit or MSTU. An MTSU is usually established by ordinance of the Board of County Commissioners to assess benefiting properties typically for capital improvement such as road, paving, drainage and water and sewer projects. This can be expanded to include Public Safety items such as PSAPs and can serve to identify and protect the funding source county wide.

Fee-for-Service. Arrangements are made with cities and municipalities in which the PSAPs receive an annual payment in return for the provision of emergency communications services.

Surcharge Fees. This is a fee in addition to a levied tax. Surcharge Fees require legislative approval and in the current economy, may be difficult to obtain.

Direct Tax. This is not popular with the public but the public-safety emergency communications system has higher priority than other line-item spending and a reallocation of funds could help finance a new PSAP. An example of the use of tax to fund a PSAP was the New Communications Center in Green County Missouri. An eighth-cent sales tax was enacted in 2007 and was the largest financial boost adding $1 million annually.

9.1.1 Other Potential Funding Sources:

Equipment Lease/Vendor Financing. Vendors and interested third parties may provide a lease-to-own in lieu of an outright purchase. The purchase/lease agreement spreads the costs over a number of years of network operation but has a higher cost of ownership. This option must satisfy applicable procurement requirements and obtain executive approval.

Vendor Supported Grant Assistance. Companies may assist public safety agencies seeking grants. They develop grant writing assistance programs and may assist by doing research and building scenarios that address specific needs.

9.2 Government Grants and Loans:

Government Bonds. A standard approach to fund public-safety emergency communications. Bonds of a magnitude needed to fund a new PSAP would require legislative support and possibly referendum approval by citizens. Approval timeframe is usually during the annual November voting process.

FEMA'S Assistance to Firefighters Grant (AFG) Program. This is an annual competitive Department of Homeland Security grant program administered by FEMA that is designed to assist local fire departments and other organizations in protecting citizens and firefighters.

These are one-year grants ranging in dollar value from a few thousand to over $1 million. Annual grant program announcements and solicitation for grant proposals usually are published near the end of each calendar year. Application period for 2011 was open from August 15 to September 23, 2011. Awards are made periodically throughout the year.

FEMA's Public Safety Interoperability Communications (PSIC) Grant Program. The Department of Commerce (DOC), in consultation with the Department of Homeland Security (DHS), established and implemented a $1 billion grant program to assist public safety agencies in enhancing communications interoperability nationwide. On September 30, 2007, the PSIC Grant Program awarded $968,385,000 to fund interoperable communications projects in the 56 States and Territories. PSIC awards assist public safety agencies in the acquisition of, planning and coordination of, deployment of, or training for the use of interoperable communications systems.

Note: The PSIC Grant Program enacted in 2005 is a one-time grant program. At this time future funds will not be made available through PSIC. However, with the economic conditions as they exist today there is a possibility (even remote) that this grant program or another federal grant program with the same or similar mission may be reactivated/activated.

USDA Rural Development's Community Facilities Loans and Grants Program. USDA Rural Development makes and guarantees loans to develop essential community facilities in rural areas and towns of up to 20,000 in population. Rural Development can guarantee loans made and serviced by lenders such as banks, savings and loans, mortgage companies which are part of bank holding companies, members of the Farm Credit System, or insurance companies regulated by the National Association of Insurance Commissioners. Rural Development may guarantee up to 90 percent of any loss of interest or principal on the loan. Normally, guarantees will not exceed 80 percent. Direct loans from USDA can also be made to applicants who are unable to obtain commercial credit.

Grants are authorized on a graduated scale. Applicants located in small communities with low populations and low incomes will receive a higher percentage of grants. Grants are available to public entities such as municipalities, counties, and special-purpose districts.

According to MN Statue 465.73, a city, county or town may borrow not to exceed $450,000 from USDA Rural Development. However, the obligation of the note is not to be included when computing the net debt of the city, county or town. It also allows for issuance of the note without voter approval.

US Department of Homeland Security's Emergency Operations Center (EOC) Grant Program. This Grant Program was established to provide funding to improve emergency management and preparedness capabilities by supporting flexible, sustainable, secure, strategically located, and fully interoperable EOCs with a focus on addressing identified deficiencies and needs. This program provides funding for construction or renovation of a state or local government's primary EOC. Fully capable emergency operations facilities at the state and local levels are an essential element of a comprehensive national emergency management system and are necessary to ensure continuity of operations and continuity of government in major disasters caused by any hazard.

The FY 2011 EOC Grant Program funds were allocated competitively for construction or renovation of a state or local government's primary EOC. The EOC Grant Program has a 75 percent (75%) Federal and 25 percent (25%) grantee cash-or in-kind cost match requirement.

9.3 Non-Governmental Grant Programs

Public Safety Foundation of America (PSFA). The PSFA is a 501 (c)(3) charitable organization (non-governmental) that was established in 2002 by the Association of Public-Safety Communications Officials (APCO).The primary objective of PSFA is to provide critical funding and technical support to PSAPs and local emergency response officials.

The PSFA provides financial assistance for agencies struggling to deploy enhanced 9-1-1 (E911) was recognized. Under the PSFA's original mission, five rounds of grants were completed and included the delivery of more than $13 million to over 200 agencies in 40 states.

Currently the PSFA funds new or ongoing projects for the betterment of the public safety communications community. Eligible projects include:

- Planning and Coordination – expenses related to determining how best to plan for or coordinate a major organizational public safety communications project.
- Strategic Initiatives – expenses related to high level programs addressing organizational challenges and issues related to improving the overall quality of a public safety communications agency or organization.
- PSAP Equipment and Technology – expenses associated with the physical equipment required for an acquisition or upgrade within a public safety communications agency or organization.
- Education – expenses associated with developing and implementing programs to educate public safety agencies and other stakeholders about the importance of public safety communications or public safety communications issues.

Green County Missouri received the following grants for their new PSAP scheduled to open in 2012:

- $1 million dollar FEMA Grant.
- $450,000 Department of Energy Grant.
- $300,000 Energy Efficiency Grant for sustainable materials.
- $1.1 million dollar grant through COPS (Community Oriented Policing Services) for technology.

Appendix A

PSAP Benchmark Comparison Table

MN Southeast PSAP Consolidation
PSAP Benchmark Comparison Table

	Bloomington PD	Carver Co., MN	Scott Co., MN	Winnebago Co., WI	Outagamie Co., WI	Waukesha Co. WI	St. Louis Co., MN	Red River, Fargo-Moorhead	Washington Co., MN	Anoka Co., MN	Dakota Comm Center, MN	Ramsey Co., MN
Service Area Population	85,238	91,042	130,000	166,994	176,695	185,000	200,226	208,777	238,136	330,844	398,552	501,428
Non-supervisory Disp.	14	14	14	32	29	41	34	26	24	33	54	121
Supervisors	-	2	3	-	6	6	6	6	6	6	7	7
I/T Support	1.00	-	0.25	-	-	1.00	1	2.00	-	-	2.00	2.75
Radio Support	-	-	0.50	-	-		5	1.00	-	-	-	-
Admin Support	-	-	-	-	-	1		-	-	1	1	1
Director/ Administrators	1	1	2	1	1	2	1	2	1	2	2	2
Total PSAP Staff:	**16**	**17**	**20**	**33**	**36**	**51**	47	**37**	**31**	**42**	**66**	**134**
# Dispatch Work Stations	5		8	9	7	14	12	8	16	8	23	
Facility Square Feet	unk	3,000	2,112	1,960	1,144	12,000	25,000	5,560	4,822	4,821	25,000	15,000
Stand-alone facility?	no	no	no	no	no	yes	no	no	no	no	yes	no
911 Calls	19,421	27,577	38,048	45,168	42,220	63,669	145,145	58,977	70,010	167,000	151,530	312,000
Admin Calls	111,000	128,261	133,952	168,603	157,211	153,027	103,449	179,997	130,300	140,700	148,921	474,000
Total Phone Calls:	**130,421**	**155,838**	**172,000**	**213,771**	**199,431**	**216,696**	248,594	**238,974**	**200,310**	**307,700**	**300,451**	**786,000**
Law Enforcement CAD	71,947	40,034	65,075	140,422	127,276	190,973	146,147	91,944	unk	180,573	285,950	359,987
Fire/EMS CAD	1,152	2,533	7,682	14,109	10,639	15,605	21,059	21,856	unk	20,431	18,856	43,873
Total CAD Events:	**73,099**	**42,567**	**72,757**	**154,531**	**137,915**	**206,578**	167,206	**113,800**	**unk**	**201,004**	**304,806**	**403,860**
Total CAD & Phone Events:	**203,520**	**198,405**	**244,757**	**368,302**	**337,346**	**423,274**	415,800	**352,774**	**unk**	**508,704**	**605,257**	**1,189,860**
Personnel Costs	$ 1,200,000	$ 1,205,200	$ 1,708,300	$ 2,704,400	$ 2,760,460	$ 3,906,251	$ 3,386,970	$ 1,683,280	$ 2,341,700	$ 3,088,130	$ 5,024,800	$ 11,844,570
Total PSAP Budget:	$ 1,600,000	$ 1,682,600	$ 1,861,200	$ 3,266,150	$ 3,291,770	$ 4,712,692	$ 3,901,425	$ 3,152,649	$ 2,482,900	$ 3,580,950	$ 7,306,410	$ 13,107,910
Staff as % of operations:	75%	72%	92%	83%	84%	83%	87%	53%	94%	86%	69%	90%

Appendix B

PSAP Cost Comparison Options Spread Sheets

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Appendix B
SE MN PSAP Consolidation, Average PSAP Operational Costs
10 Center Option

	Dodge	Fillmore	Freeborn	Goodhue	Houston	Mower (2009)	Olmsted (2009)	Rice/Steele	Wabasha	Winona	Totals
Personnel Staff Costs	$448,008.00	$350,000	$422,220	$760,567	$494,514	$649,749	$1,918,485	$1,377,889	$675,621	$804,594	$7,901,647
Equipment Costs							$12,578		$4,511	$20,821	$37,910
Operational Costs	$26,000.00	$20,000	$26,020	$52,282	$13,500	$10,202	$43,169	$70,347	$28,275	$30,982	$320,777
Maintenance Costs	$19,000.00	$8,000	$34,764	$84,850	$14,300	$35,539	$128,682	$348,668	$5,847	$8,489	$688,139
Other Costs			$227,734			$45,741	$2,092	$32,828	$8,354	$0	$316,749
Total Costs	**$493,008**	**$378,000**	**$710,738**	**$897,699**	**$522,314**	**$741,231**	**$2,105,006**	**$1,829,732**	**$722,608**	**$864,886**	**$9,265,222**

(All costs for the year 2010 except where noted)

* NOTE: Per discussion w Sheriff Amazi - The originally report $831,074 Personnel Staff Costs include the 3 Specialty staff positions that are cross trained for dispatch but do not typically perform Dispatch functions. The 3 staff provide for the peripheral administrative functions. The revised Dispatch Personnel Staff Costs are $649,749.

Phase III Report - PSAP Consolidation Implementation Plan

Southeast Minnesota PSAP Consolidation Study

For the Southeast Minnesota Regional Radio Board

SEH No. SMRRB 115592

May 2012

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Southeast Minnesota PSAP Consolidation Study
Phase III Report - PSAP Consolidation Implementation Plan
For the Southeast Minnesota Regional Radio Board

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May 2012

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Phase III Report - PSAP Consolidation Implementation Plan

Southeast Minnesota PSAP Consolidation Study

Prepared for Southeast Minnesota Regional Radio Board

1.0 Project Background

The Southeast Minnesota region currently operates 10 Public Safety Answering Points (PSAPs) in 11 counties. Each county has its own dispatch center that operates 24 hours per day, 7 days per week. The exception is Rice and Steele Counties who have consolidated their operations and have a joint PSAP facility in Owatonna, MN located in Steele County. The 10 PSAP centers provide 911 call taking, emergency dispatching, and other communications related services. Each of the current 10 PSAPs has a unique character, set of customers, and individualized operating environment. However, there are also many common operating parameters and functions that are shared by all of the centers in the region.

2.0 Scope

The Southeast Region has undertaken a study to examine what impact restructuring would have on the cost of operating the PSAPs and whether any proposed restructuring would provide operational efficiencies and/or improve the delivery of services to the public.
In 2011, meetings were held with a steering committee that consisted of members from each of the counties within the Southeast Region. A detailed assessment of existing operations and current and future technology considerations was completed. This assessment also reviewed staffing, call volumes, and services provided. The assessment identified the potential for improvements in service and opportunities for cost savings. An Options Development and Business Plan process explored the creation of a 4 center, 3 center, and 2 center model for PSAP operations in this region. The Business Plans identified new governance models and proposed organizational alignment, new center staffing, and budgeted initial capital costs. This implementation plan will provide a PSAP alternative comparison model and justification, outline migration project management responsibilities and services, provide a responsibility matrix and suggests typical project timeline for creating a consolidated PSAP.

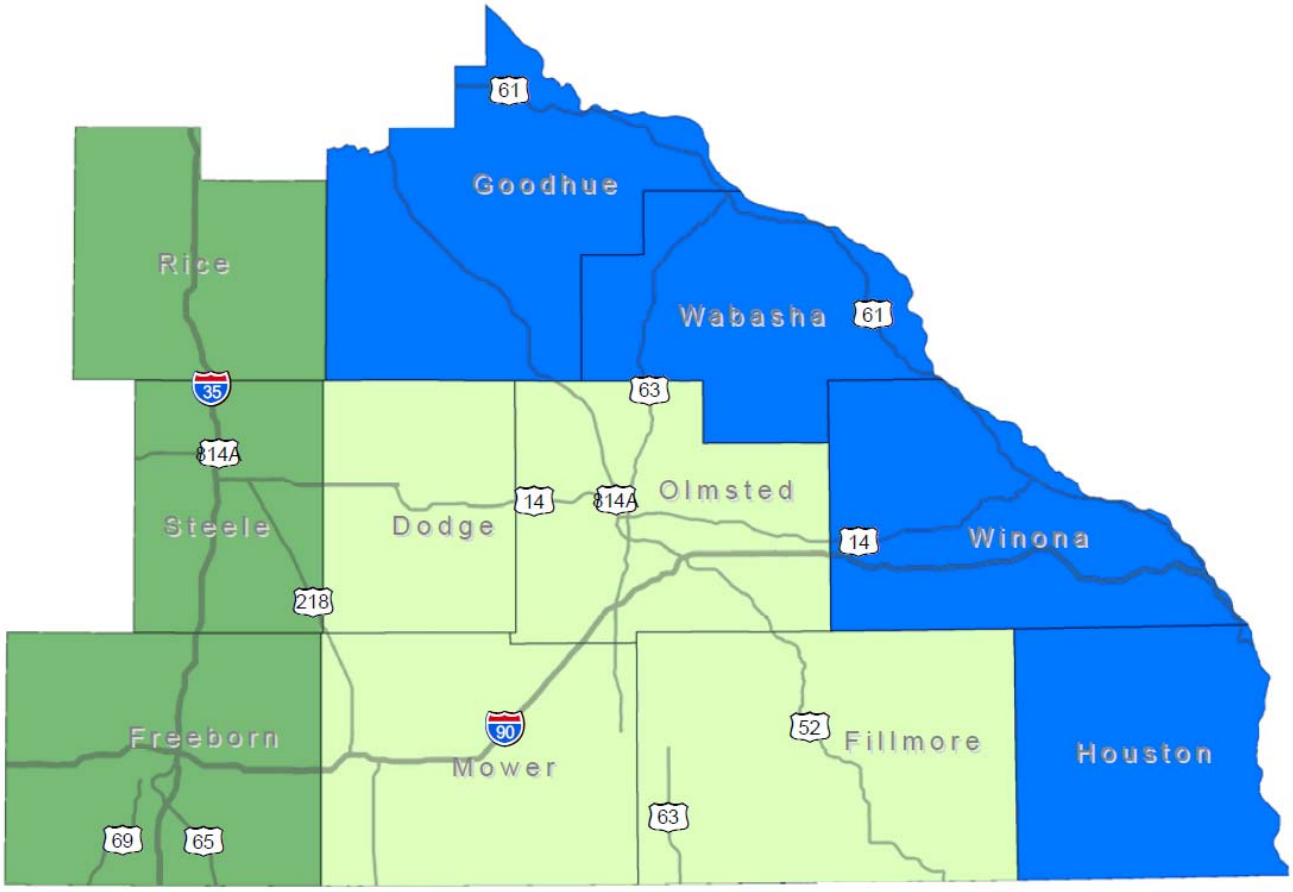
3.0 Objectives

The purpose of the Southeast PSAP Consolidation project is to establish a project plan that will enable the Southeast Region to proceed with PSAP restructuring by migrating the current 10 county PSAP Centers to a configuration consisting of 3 sub-regional PSAP Centers. The restructuring of the current 10 PSAPs will require remodeling of existing facilities or the construction of new centers. The consolidated PSAP Centers will be staffed at levels that will both provide operational efficiencies and improve the delivery of services to the public. The three centers will consist of the consolidation of the following counties:

- A Highway 61 corridor center consisting of a consolidation of Goodhue, Houston, Wabasha, and Winona Counties.
- An I-90/Highway 14 corridor center consisting of a consolidation of Dodge, Fillmore, Mower and Olmsted Counties.
- An I-35corridor center consisting of Freeborn, Rice and Steele Counties.

Figure 1 shows the southeast Minnesota counties in the 3 center configuration.

Figure 1 – Map of 3 Center Option – Transportation Corridors



This preliminary Implementation Plan Statement of Work (S.O.W.) defines the responsibilities of the parties involved in planning the governance, management and deployment for the new PSAPs. The following documents are supplements to this plan:

- Appendix A – SE PSAP Consolidation, Work Plan Task Responsibility
- Appendix B – SE PSAP Consolidation, Risk and Mitigation Study
- Appendix C – SE PSAP Consolidation, 3-Center Consolidation Timeline

4.0 PSAP Alternatives Comparison

In order to provide a high level comparison of the three PSAP consolidation scenarios identified in the business plan, we have considered the goals and objectives provided by study participants in Section 4.0 of the business plan report along with major consolidation goals found in consolidation discussions nationwide. Using these factors we have developed comparisons of the 2, 3 and 4 center options to provide a summarized, high level view of the relative merits of each option.

4.1 Comparison Factors

As part of this study, participants were asked to identify desired outcomes of PSAP consolidation. The list below reflects the input received in this process, supplemented by additional desired outcomes we have identified through the broader discussion of PSAP consolidation taking place nationally:

1. Improved levels of service.
2. Achieve cost savings/financial efficiencies.
3. Improve responder safety.
4. Improve multi-agency/multi-discipline coordination.
5. Prepare for future technologies.
6. Equity and fairness in process and outcomes.

The degree to which a consolidated PSAP would achieve each goal area would be influenced by the variables of organizational structure, resource commitment, governance model selected and management practices. However, it is possible to make general comparisons of the scenarios based upon the inherent characteristics of each model. We did not compare the scenario choices in regards to goal #6, equity and fairness in process outcomes since this area is not a function of the particular PSAP model chosen, but is a function of the implementation process agreed to by the participants.

We have summarized the comparisons in Table 1.

4.2 Improved Levels of Service

Participants were very consistent in their comments that service levels be held high in the consolidation discussion. Typically, this was expressed along the lines of “services must be equal to or better than” existing services for the process to continue forward. Our comparison is theoretical by nature, as the proof of service level improvements would be available after the consolidated PSAPs were operating and stabilized. Adding to the challenge is the fact that due to variations in management practices and technology used by the current PSAPs, key performance measures simply are not available to be used in comparison to each other or a future PSAP.

While what constitutes a "higher level of service" is often in the eyes of the beholder, we have used the examples provided by study participants as well as common industry standards to make our comparisons.

- **E911 call taking/call transfers.** A commonly identified benefit to PSAP location is the reduced need for 911 call transfers between PSAPs. Whenever a 911 call is transferred between PSAPs, additional time is added to the process along with the possibility of a call lost due to human or equipment error. These two factors directly impact the time required for responders to reach incident locations.

  This issue has taken on increased significance with the ever increasing move to wireless telephone technology. Because wireless 911 calls are routed based upon the caller's proximity to wireless network infrastructure as opposed to the caller's exact location, it is quite common for calls to be delivered to the adjacent PSAP rather than the PSAP of jurisdiction. The percentage of 911 calls made from wireless devices (including text and video calls in the future) will continue to increase. According to figures provided by the Federal Communications Commission (FCC), in the two years from 2007 to 2009, the number of "wireless only" households in the United States grew from 16 million to 28.8 million. This means that nearly 1 in 4 households relies solely on a wireless device to contact 911 for help in an emergency. While 911 transfers cannot ever be eliminated, there is an inherent reduction in the necessity to transfer calls as the service area size increases.

  Call transfers also occur because fire responders serve areas that cross county boundaries. Adjacent counties often receive calls that need to be directed to neighboring PSAPs because the response jurisdiction of the fire responders do not follow strict county boundary lines. As PSAP service areas increase to include multiple county service areas, the need to transfer calls will be reduced.

- **Transition to consistent service levels and Standard Operating Procedures across the region.** Participants expressed the need for PSAPs across the region to provide consistent service levels and move to more standardized procedures, particularly important during multi-jurisdictional events such as severe weather, major fires, pursuits or major crimes. A single management/governance structure for regional PSAPs would result in the greatest standardization of procedures and service levels, but any of the three models proposed would improve standardization over the current service model.

- **Improve staffing efficiencies.** Through combining staff from multiple centers, a PSAP manager can create staffing and work load levels that eliminate current gaps for off-hours, or when employees call in sick, vacation, etc. As a general rule, consolidated PSAPs are able to provide staffing capacities which provide greater flexibility to meet planned or unplanned needs. As the number of staffed positions on the dispatch floor increase, the PSAP will provide greater flexibility to respond to extraordinary activity periods as well.

- **Maintain community rapport and local personal touch.** A common concern expressed during PSAP consolidation discussions is the potential loss of the customized local services which are often intertwined into the business practices of the hosting law enforcement agency. While the specific "basket of services" provided by a regional PSAP is ultimately determined at the policy/governance level, it is fair to generalize that the regional PSAP is not organized in a manner to provide highly customized services at the individual community level. This issues is somewhat mitigated by the functionality

of modern Computer Aided Dispatch (CAD) system which are configurable to reflect local agency response rules, thereby accommodating the individual agency needs.

- **Dispatcher training.** The establishment of larger, fully consolidated PSAPs helps ensure that all dispatchers receive the same standardized training. This reduces service level disparities and contributes to more consistent procedures across jurisdictional lines.
- **Ancillary dispatch tasks.** Sometimes referred to as "non-dispatch tasks", ancillary duties are those dispatch duties not directly related to the core tasks of 911 answering and agency dispatch. Some positions and functions that provide non dispatch duties may not be suitable for transition to a consolidated PSAP. Redesign, reassignment or elimination of these tasks may be required if consolidation occurs. Consolidated PSAPs are most typically staffed to accommodate the core tasks of 911 answering and dispatching of responders. Additional duties are assumed in accordance with staffing capacity and decisions made at the policy level.
- **Dispatcher knowledge of service area geography.** Loss of dispatcher knowledge of the service area geography is typically the most commonly expressed concern with consolidations. While this issue can be a concern, particularly during transition, modern technology, experience and staffing practices have been shown to mitigate this issue in previous consolidations.
- **Enhanced capacity for extraordinary activity, back-up and redundancy.** Because the impact of PSAP failure increases with PSAP size, it is critical to consider back-up and redundancy in PSAP design and management. In addition to facility and equipment protection, regional PSAPs should have additional work stations to accommodate staff during extraordinary activity periods and also as a means of internal redundancy in the event of work station failure. The second component of this issue is staffing efficiency which is discussed above.

4.3 Achieve Cost Savings/Financial Efficiencies Through Economies of Scale

In addition to service level improvements, an important issue in consolidation discussions is the potential for cost savings and more efficient use of budget resources in the PSAP operation. A 2010 study by the International Chiefs of Police (IACP) reported that 85% of law enforcement agencies in the United States had reduced budgets in the prior year and that approximately 8,000 law enforcement positions had been lost nationwide due to the economic downturn. Against this backdrop, local governments nationwide are searching for opportunities to reduce costs while preserving critical services.

- **Reduced duplication through shared technology infrastructure.** The PSAP environment is becoming increasingly dependent on expensive core technologies such as 911 answering equipment, radio consoles, logging recorders and Computer Aided Dispatch. One of the most significant proven benefits of PSAP consolidation is the ability to share a common technology backbone over a wide area.
- **Connect performance to resources through standardized performance benchmarks.** Measurement of PSAP performance is particularly important in consolidated PSAPs where multiple jurisdictions are sharing costs. Current technologies allow for accurate measurement of key tasks such as 911 answering times and the time required to dispatch an incident to responders. Random audits and surveys of callers and user agency staff can be used to evaluate the more qualitative aspects of PSAP performance.
- **Relocation and reuse of existing equipment.** Leveraging the existing investment in core PSAP technologies was identified by study participants as an important way to

capture financial efficiencies. In the three and four center scenarios, reuse of existing CAD systems would be more likely than the two center scenario.

- **Reduced staffing requirements.** Staffing cost reductions in PSAP consolidations are normally less than the savings realized through sharing of technology systems. We do note significant staff savings in the 2 and 3 PSAP scenarios as several small PSAPs are replaced with consolidated centers. Using industry standard staffing calculations we project that as few as 100 PSAP staff may carry out the work currently performed by 128 employees, without a drop in processing times.
- **Reduced operating costs.** Consolidation associated cost savings come primarily from the reduction and/or elimination of duplicate networks and technology and associated maintenance costs. Streamlining the network of circuits, trunks and voice and data transport methods may result in immediate savings. Rather than purchasing and maintaining redundant and often dissimilar systems in multiple PSAPs, a single PSAP requires only a single set of systems and technology.
- **Reduced migration/transition costs.** What is the initial required investment for facilities remodeling and expansion, staffing relocation and new technology implementation?

4.4 Improved Responder Safety

Responder safety is perhaps one of the most subjective judgments to be considered in the PSAP consolidation discussion. While some will argue that the local PSAP is more focused on the local responder, in our judgment a well equipped and properly organized consolidated center is able to focus more intently on field responders due to improved work flow processes and greater staffing flexibility which reduce the likelihood of the PSAP being overwhelmed by extraordinary incidents or activity periods.

4.5 Improved Coordination

Expectations for voice and data communications interoperability, including information sharing, between jurisdictions, between emergency service disciplines, and between PSAPs, have increased significantly in the Homeland Security era of public safety service delivery. While Minnesota has made strong progress in this area with the establishment of the ARMER public safety radio system, interoperability between responders served by different PSAPs is more difficult than within the PSAP service area as dispatchers from multiple PSAPs must communicate with each other to establish communications paths.

- **Improved coordination of public safety agency activities and the effectiveness of inter-agency radio communications.** As the PSAP span of control (geography and agencies) increases, coordination of multiple agencies improves. All of the scenarios represent substantial improvement potential over the current 10 PSAP model. The 3-center PSAP scenario rates as high for potential to improve interagency coordination.
- **Better records and information sharing between participating agencies.** The potential for improved records and information sharing between agencies in the region will be driven not only by technology, but at least as much by policy decisions made within the region. Assuming that consolidation reduces the number of CAD systems within the region, improved sharing of incident data will inherently be improved.

4.6 Prepare for Future Technologies

Today's PSAP is becoming increasingly reliant on expensive core technologies including Computer Aided Dispatch, Radio Dispatch Consoles, Logging Recorders and 911 answering equipment. The ability to spread costs for the purchase, operations and support of these

systems over a larger population base has proven to be one of the most significant benefits of PSAP consolidation.

Table 1
Consolidation Scenario Comparisons - Summary

	Likely Hood of Achieving Performance Goal			
	1=low	2=moderate		3=high
PSAP Performance Criteria	**2 PSAPs**	**3 PSAPs**	**4 PSAPs**	**Current**
I. Service Level Improvement				
Reduce 911 Transfers	3	3	3	1
Consistent SOPs Across The Region	3	3	2	1
Staffing Efficiencies	3	3	3	1
Personal Touch	1	2	3	3
Dispatcher Training	3	3	2	1
Non-Dispatch Task Fulfillment	1	1	1	3
Knowledge of Geography	2	2	2	3
Back-up and Redundancy	3	3	3	1
Service Level Total:	**19**	**20**	**19**	**14**
II. Cost Savings/Financial Efficiencies				
Shared Technology Infrastructure	3	3	2	1
Consistent PSAP Performance Standards	3	2	2	1
Relocation/Reuse of Existing Equipment	1	2	3	3
Reduced Staffing Requirements	3	3	2	1
Reduced Operating Costs	2	3	1	1
Reduced Transition Costs	2	3	1	3
Cost Savings Total:	**14**	**16**	**11**	**10**
III. Improved Responder Safety	**3**	**3**	**3**	**1**
IV. Improved Coordination				
Enhanced Radio Interoperability	3	3	3	1
Enhanced Data and Information Sharing	3	3	2	1
Coordination Total:	**6**	**6**	**5**	**2**
V. Prepare for Future Technologies	**3**	**3**	**3**	**1**
Total of All Elements:	**45**	**48**	**41**	**28**

5.0 Governance

In a PSAP Consolidation, success begins with the development of an appropriate governance structure to establish a shared vision and a collaborative decision-making process. The process will guide policy, financial arrangements, service levels and other terms and conditions required to manage and operate the consolidated PSAP. All affected stakeholders should have input to the consolidation process and, where appropriate, into the operational and administrative oversight of the resulting organization. A collaborative effort between public safety response agencies and municipalities should also be part of the governance planning process.

Below are some of the typical steps involved in establishing governance:

- **Nominate a project leader and project sponsor.** Name a senior executive project sponsor who will facilitate access to resources and people where required.
- **Identify role and responsibilities.** The members of the governance structure play an important role in the implementation of the PSAP consolidation. It is important to identify the roles and responsibilities of members to ensure transparency and accountability.
- **Governance structure.** Establish a governance structure that emphasizes transparency, accountability, and collaboration.
- **Identify key stakeholders and interests.** Communicating with the stakeholders is essential to ensure they have input into determining direction and goals and what they see as key benefits, key concerns, and what the priorities should be.
- **Prioritize desired outcomes.** Establish a clear view of the highest priority outcomes and results to be achieved which will enable initiatives to be established that will best achieve the desired outcomes. Clear expectations are needed and should help to establish performance measures.
- **Identify key risks and concerns.** Recognizing risks allows them to be eliminated, minimized, or mitigated. A board should regularly review the main strategic and operational risks facing the organization for the following reasons:
  - To counter losses;
  - To reduce uncertainty;
  - To take advantage of opportunities
- **Establish support and buy-in from stakeholders.** Stakeholders are more likely to support the PSAP Consolidation Plan if they are participating in the governance process and are more likely to buy into the plan if they feel like they were heard, and the process of developing the plan was fair and inclusive.
- **Annual report to stakeholders.** The board should report annually to key stakeholders on the organization's progress, accomplishments, and challenges. Annual reports should also reinforce key elements of its processes and procedures.
- **Establish and/or communicate policies.** Policies need to establish the basic rules and guidelines for how staff work, providing one of the most direct mechanisms for implementing governance.
- **Set the parameters for the future.** Work with leaders from the public safety community to identify the governance vision, mission, and authority to help with future planning.

Effective governance requires an accurate assessment of the broad range of agencies and disciplines affected by the PSAP consolidation. Representatives such as public officials and public safety responders at the regional, state, local and tribal levels should be identified to more effectively determine solutions. Entities from the counties that will be consolidating should be invited to participate in the governance structure and include agencies and organizations related to law enforcement, fire, Emergency Medical Services, tribal governments, tribal law enforcement, transportation, Emergency Management, disaster relief agencies, and others served from a consolidated center.

6.0 Project Champion

A "Project Champion" is essential to the success of a PSAP consolidation. The Champion will spearhead the process from interest building all the way through implementation and acts as a single point of contact with the executives. The Champion can be an individual person or a group of people. Prior to establishing governance, each participating county may have their own Champion selected to represent them on the governance board. Choosing the right project champion can determine the outcome of a project to a certain extent. They must have good people skills, be committed to pursuing support for the concept of change, have a passion to push change through, and be able to educate potential participants about the consolidation process.

The roles of the Champion include:

- Keeping the consolidation concept in the forefront and preventing it from falling by the wayside.
- Authority to use resources within or outside an organization for completion of a given project.
- Setting benchmarks associated with the consolidation project and periodically reviewing the project's success in meeting the established benchmarks.
- Modifying the scope of the project based on its status.
- Granting or dismissing additional resources based on the modification of the scope.
- Monitoring changes in the project and acting as a guide to drive the execution of the project successfully.
- Helping to eliminate any obstacles which hamper the project's success by conducting a risk assessment of the project.
- Ensuring best practices are deployed by the team while executing the project and focusing on obtaining continuous improvement.
- Making decisions on prioritizing individual project phases so as to eliminate redundancies while executing the project.
- Reporting to the top management about the status of the project.

Often an individual is promoted, or hired to serve as Project Champion for a PSAP consolidation. This individual could ultimately take the role of PSAP Executive Director or Communication Center Manager. Having this person assigned early and leading the initial planning and PSAP deployment process can provide continuity to the project. This continuity can be beneficial for building trust with stakeholders and provides the PSAP director experience and insight into organizational and operational issues that can help with transitional and start-up phases of the consolidation.

7.0 Project Management Responsibilities & Services

The new Southeast Regional Consolidated PSAP Center will use a number of vendor services to deliver various phases of the PSAP construction. A number of architects, contractors and vendors will be engaged at various stages of the project. Vendors will include those for radio consoles, dispatcher work stations, telephone systems, CAD equipment and others.

As part of delivering the Project Management Responsibilities and Services, the project team will handle the managerial, scheduling, engineering and technical tasks associated with the following:

- **Pre-design Phase**
  - Coordinate design activities for renovation of the existing site that will become the new consolidated PSAP with subconsultants. Establish a communications hierarchy. Attend and document meetings with stakeholders to review progress of the project. Request approvals when appropriate.
  - Coordinate and attend meetings with appropriate zoning and code officials. (State and local Building Code officials, Fire Marshal, Accessibility Council, Health Department, municipality, Pollution Control Agency, Federal unit of government).
  - Determine special requirements for mechanical, electrical, civil, voice/data communications and structural systems.
  - Verify existing utility infrastructure for adequate capacity and cost upgrades needed to support the proposed site renovation.
  - Format budget, estimated cost of construction and proposed schedule in order to track the history of costs and comparisons to the predesign or initial scope of work through future design phases.

- **Design Development Phase**
  - Site design is refined, the plans, sections, elevations, etc. are drawn to scale, principle dimensions are noted, the structural system is laid out, and major mechanical and electrical components and distribution routes are located. Critical interior spaces are drawn and elevated for review, and preliminary specifications assembled.
  - Technology vendors are engaged for detailed cost estimates.
  - Electrical, communications, and connectivity systems are designed with complete integration and installation detail including connectivity to legacy systems as approved.

- **Construction Document (CD) Phase**
  - Prepare final drawings, specifications, conditions of the contract and bidding requirements based on approved Design Development documents and in sufficient detail for bidding and construction of the project.
  - Construction testing needs are identified and communicated with the Project Champion. Quality assurance is indicated in each specification division; defining the type of test and method; test frequency; test pass/fail tolerance; and action required for failed tests.
  - Develop Bid Specifications for equipment including Radio Console, CAD equipment, 911 phones, video services, LAN and WAN. Conduct a site audit as needed with vendors prior to identify any special equipment or installation requirements.

- Determine spare parts required to have on hand.
- Final drawings and plans are certified and pre-bid meetings are held.

- **Bidding Phase**
  - Accurate and complete construction documents prepared in order to receive accurate bids with a minimum of change orders.
  - Prepare and submit advertisements for bids.
  - Print and distribute drawings and specifications to owner, code officials. Receive requests for and distribute bid sets to contractors, sub-contractors and Builders Exchanges. Monitor the number of requests for bid sets. Contact contractors in the project area to increase interest in the project.
  - Respond to contractor inquiries, review manufacturer/supplier requests for prior approvals/substitutions with Project Champion and publish addenda as needed.
  - Conduct a pre-bid conference and attend bid opening. Review bids and provide PSAP Consolidation Team written recommendation to award or not to award the contract to a particular bidder.

- **Construction Phase**
  - Administer the construction contract(s) according to the terms, conditions, and provisions of the contract documents. Interpret the requirements of the contract documents. Advise the stakeholders concerning performance of the Contractor(s). Respond to Contractor(s) questions.
  - Observe construction and keep stakeholders informed of progress. Evaluate and record work progress. Perform construction observation visits at times appropriate to the stage of the work. Immediately take corrective action for any nonconforming work.
  - Schedule and conduct recurring and special construction progress, status, and coordination meetings.
  - Prepare documentation for all clarifications and changes in the construction work. Record reason for change.
- Develop a schedule and coordinate the delivery of all equipment, track all equipment delivery dates and update schedules.

- **Post Construction Phase**
  - Coordinate and collect information for warranty and operational manuals. Review Operations and Maintenance Manuals for completeness.
  - Coordinate systems training sessions with the user agency/facility staff.
  - Receive and review as-built drawings and specifications from the contractor. Verify that all addenda and supplemental agreement (change order) work are included.
  - Vendors to submit system installation and optimization reports for the Project Champion.
  - Establish accepted test criteria and procedures and prepare reports on the accepted test plan results.
  - Conduct site inspection and develop an itemized punch list of items that must be corrected.

- Contractors shall prepare all final documentation for all systems and present the documentation package to the Project Champion for review and acceptance.
- Activate warranty programs and any local support maintenance programs.
- Activate the Software Subscription Agreement (SSA) for applicable systems.
- Provide monthly maintenance/service reports as applicable.

8.0 Cutover Planning

The cutover from the existing PSAP centers in each of the participating counties to the new consolidated PSAP center will be conducted in three phases:

- **Phase I, Equipment Testing**. After installation has been completed for equipment, software, phone systems, data lines, voice lines and connections to the ARMER system, testing will be done to verify coverage for all counties that are part of the new consolidated PSAP. The Project Champion will sign off on all tests that have been completed successfully.
- **Phase II, Employee Training**. HR department will complete union agreements, transfers of existing staff and new hires. Staff will be trained on the equipment and systems in the new consolidated PSAP and the Project Champion notified as to the progress and completion of the training.
- **Phase III, Cutover, Site Integration, Acceptance and Sign-Off:**
  - A formal written schedule of dates and times for each work station to be cut over will have been completed, reviewed and approved by the Project Champion, DOT OEC, DOT Facilities, OET and the Vendors. Project Champion will arrange for required vendors and technicians to be on site during the actual cut-over.
  - At the scheduled time, vendors will re-route all E-911 calls from the existing county PSAP(s) to the new consolidated PSAP.
  - Dispatchers on duty along with their supervisor(s) need to test all systems to make sure they are performing as expected. The vendors should remain available for several hours after the cutover in case any assistance is needed or issues come up.
  - Complete all punch list items once the cutover has been completed and is successful.
  - Final Acceptance and sign off on the deliverables.

Appendix A

Work Plan Task Responsibility Matrix

SE PSAP Consolidation, Work Plan Task Responsibility Matrix

(Draft)

JCC
5/10/12

Southeast PSAP Consolidation Project, Plan for 3 Center Consolidation

Legend:
P - Primary, directly responsible
S - Secondary, responsible for coordinating with primary
A - Approve, responsible for decision making process, sign off required
R - Review, responsible for reviewing plans and specifications as provided

Task	Consolidated PSAP Manager	Participating County	Facility Owner	Vendor(s)
Pre Design Phase				
Coordinate design activities	P	R	S	R
Establish communications hierarchy	P	R	R	R
Attend meetings with stakeholders	P	R	R	~
Attend meetings with zoning & code officials, obtain permits and licenses.	P	R	S	R
Determine requirements for mechanical, electrical, civil, voice/data, & structural systems.	P	R	S	R
Floor Layout	P	R	R	R
Verify existing utility infrastructure for adequate capacity	P	R	S	R
Format Budget, Estimated Cost of Construction & Schedule	P	R	R	R
Design Development Phase				
Site design is refined, plans drawn to scale	P	R	S	R
Technology vendors engaged for detailed cost estimates	P	R	R	S
Design of electrical, communications, connectivity & connection to legacy systems	P	R	S	R
Construction Document (CD) Phase				
Prepare final drawings, specs, contract conditions & bidding requirements.	P	R	S	R
Identify construction testing needs	P	R	S	R
Develop Bid Specifications for all equipment.	P	S	~	~
Determine spare parts required	P	S	~	~
Certify final drawings & hold pre-bid meetings	P	R	S	~
Bidding Phase				
Complete & prepare construction documents	P	R	S	~
Submit advertisements for bids	P	R	S	~
Distribute bid sets to contractors, sub-contractors and Builders Exchanges	P	R	S	~
Respond to contractor inquiries	P	R	S	~
Conduct a Pre-bid conference	P	R	S	~
Review bids and provide & provide recommendations	P	R	S	~
Construction Phase				
Administer the construction contract(s)	P	R	S	~
Site access	P	R	A	R
Site Inspections, evaluate work progress	P	S	R	R
Schedule meetings for status updates	P	R	R	~
Document changes construction work	P	R	R	~
Schedule & track delivery of equipment	P	R	R	~
Equipment placement & installation	P	R	S	R
Configuration & programming of equipment	S	R	R	P
Prepare acceptance test plan	P	S	R	R
Determine required spare parts	P	R	R	R
Post Construction Phase				
Review documentation package from contractors for final acceptance	P	R	R	R
Collect information for warranty & operational manuals, review for completeness	P	R	R	R
Coordinate systems training sessions with the	P	R	R	R
Review asbuilt drawings and specifications from the contractor	P	R	R	R
Vendors submit system installation and optimization to Project Champion	S	R	R	P
Establish accepted test criteria and procedures	P	R	R	R
Conduct site inspection, develop itemized punch	P	R	R	R
Contractors prepare all final documentation for all systems, submit to Project Champion	S	R	R	P

SE PSAP Consolidation, Work Plan Task Responsibility Matrix

(Draft)

JCC
5/10/12

Southeast PSAP Consolidation Project, Plan for 3 Center Consolidation				
Legend:				
P - Primary, directly responsible				
S - Secondary, responsible for coordinating with primary				
A - Approve, responsible for decision making process, sign off required				
R - Review, responsible for reviewing plans and specifications as provided				
Task	**Consolidated PSAP Manager**	**Participating County**	**Facility Owner**	**Vendor(s)**
Activate warranty & maintenance programs	P	R	R	R
Activate the Software Subscription Agreements	P	R	R	R
Provide monthly maintenance/service reports	P	R	R	R
Cutover Planning				
Complete testing of all equipment & systems	P	R	R	R
Complete union agreements, transfers of existing staff and new hires and training	P	R	~	~
Schedule dates & times for each work station to be cutover & required vendors to be on site	P	S	~	~
Test all systems & verify performance	P	S	R	R
Complete all punch list items	P	R	R	R
Final Acceptance & sign off on deliverables	P	R	R	R

Appendix B

Project Risks and Mitigation Strategies

SE PSAP Consolidation, Project Risks and Mitigations Strategies

Project Risk	Description	Mitigation Strategy
Project Coordination	Lack of coordination and communication with county agencies, management, vendors, staff and others may jeopardize the validity, success or acceptance of the results and outcomes of the consolidated PSAP Center.	1. Status and summary information for PSAP Consolidation should be made widely available to stakeholders and interested parties. 2. Reports to the Governance Board will be given as requested. 3. The project manager should provide weekly reports and schedule conference calls to address any issues or concerns.
Capital Costs	Under estimation of limited funding for equipment or facility upgrades.	1. Do a formal detail design review. 2. Engage vendors early in the design plan.
Project Momentum		1. Leadership direction. 2. Get going on Governance 3. Final commitment early.
Agency Buy-in	Timing of counties and agencies coming into the consolidation.	1. Establish equal access to governance and planning processes, regardless of agency size. 2. Establish strong communications plan to keep agencies aware of decisions and progress. 3· Conduct technology workshops to help agency staff understand enhancements to services. 4· Promote interaction between agency staff and PSAP staff through ride-alongs, PSAP visits and mutual training.
PSAP staff Buy-in		1. Establish strong communication plan. 2· Attend to HR issues early in the process. 3· Involve Operations staff in PSAP planning. 4· Conduct site visits to other consolidated centers- let them see the future.

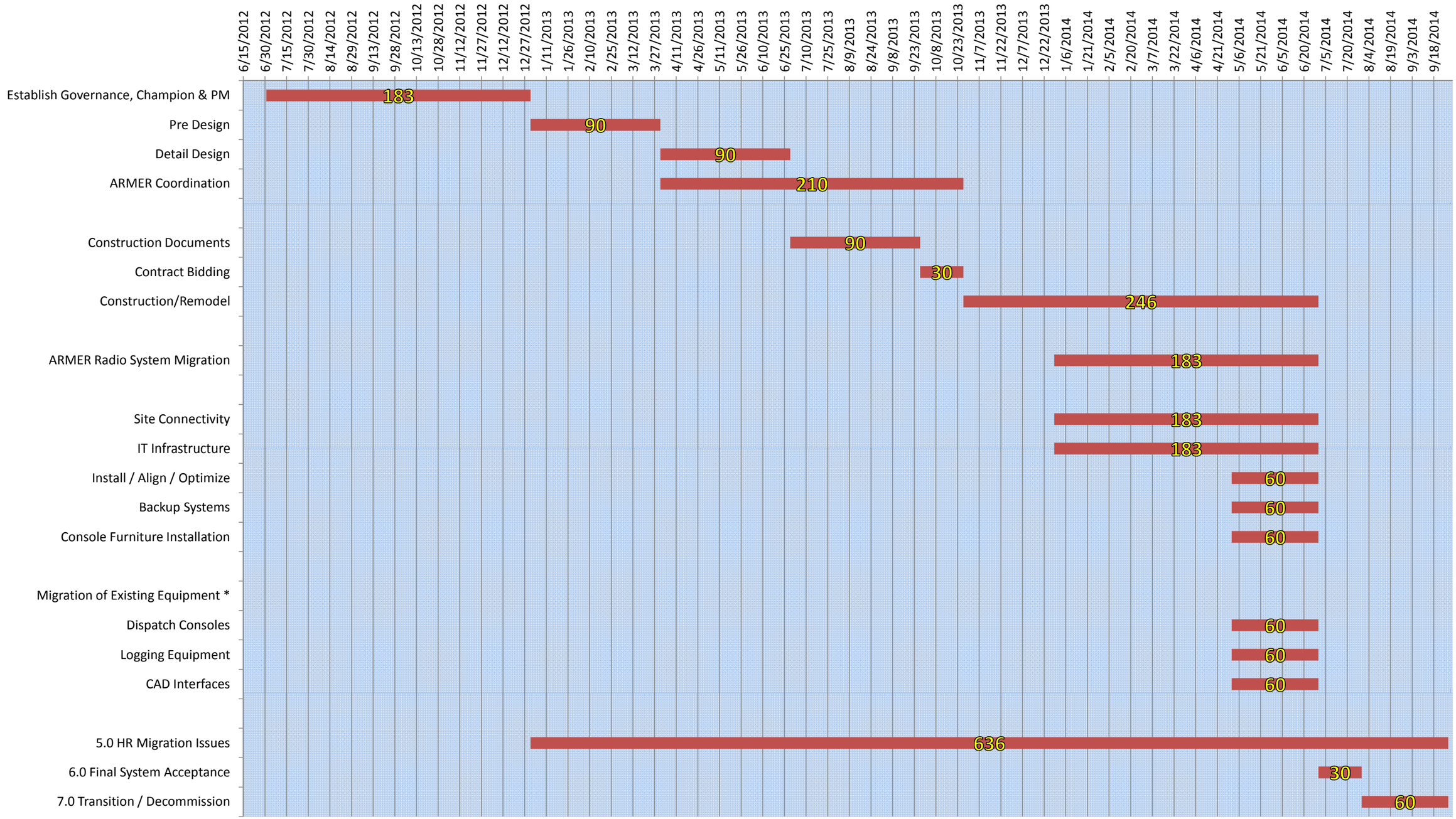
Service Quality Concerns	Concerns the new consolidated PSAP will not meet service standards.	1. Establish uniform training standards based up accepted national standards. (i.e. APCO Basic dispatch and EMD). 2. Establish clear PSAP performance measures and share results with user agencies and the public.
Jurisdiction Disputes	Disputes between participating jurisdictions during implementation planning.	1. Consider use of professional project management services to provide subject-matter-expertise and mediate disputes between participants. 2. Appoint PSAP management as early as possible to provide full time attention to implementation process.
Personal Issues		1. Alignment of agreement & terms. 2. HR meet and start a complete inventory of major terms and conditions and create a unified plan.

Appendix C

3-Center Consolidation Timeline

Southeast PSAP Consolidation, 3-Center Option, PSAP Construction Timeline

JCC
05/10/12



Project Calendar

Southeast Minnesota PSAP Study

Project Calendar

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Project Deliverable Due Date

PSAP Committee — Feb 7
- Contract / Participants
- Project Work Plan / Calendar

Project Kick-Off — Feb 28
- Project Overview
- Current Conditions Analysis
- Feasibility (Political / Technical)

Project Meeting — April 28
- Customer Needs / Products -Services
- Consolidation Models / Options
- Facilities / Geography

PSAP Site Assessment Visits — March thru August
- Site visits / Documentation / Interviews

Contract Finalized — May 16
- SEH / RRB Contract Execution

Project Meeting — June 20
- Date Gathering / Site Visit Summaries
- Draft Analysis /Feasibility Document
- Consolidation Options
- Governance Intro

Project Meeting — Aug 18
- Call Volumes/ Staffing /Erlang Model
- Cost Drivers
- Technology / Facilities

PSAP Site Assessment Visits — March thru August
- Site visits / Documentation / Interviews

Project Meeting — Sept 1
- DCC Facility Tour
- Staffing / Governance
- Start-up Issues

Project Meeting — Oct 20
- CAD / RMS Vendor Presentations

Project Meeting — Nov 30
- Governance Approaches
- Funding Considerations / Options
- Consolidation Alignment Maps

Project Call — Dec 27
- Feasibility / Assessment Report
- Documentation Review

Southeast Minnesota PSAP Study

Project Calendar

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Project Deliverable Due Date

Project Conf Call — Jan 4
Assessment / Business Plan Report
Documentation Review

Project Meeting — Jan 19
Business Plan Report / Deployment Plan
Documentation Review

PSAP Host Facility Site Research
Goodue Co.; Rochester/ Olmsted; Rice-Steele

Project Conf Call — March 29
Business Plan Report
Documentation Review

RRB Presentation — April 2
Project Summary, Status, and Findings

Held for County Presentations
Project Summary, Status, and Findings
Goodhue Co Board Confirmed 5/15

Grant Completion — June 30
RRB Grant Expiration Deadline

Project Work Plan Summary

SE MN Regional PSAP Consolidation Study

WORK PLAN Summary

Completion Status – April 2, 2012

Work Plan

The Analysis/feasibility study, Options Report, and Implementation Plan Report developed through this project will provide the Study Group with information needed for decision making regarding the number, location, and design of future PSAP(s) operated in southeast Minnesota. The reports should provide the basis for future development of policies, funding decisions, and system operations planning. Following is a list of the tasks that SEH will complete to deliver this important project.

Project Management (This task applies across all phases)

The majority of the Project Management tasks are complete. Ongoing document preparation, review and submittal will proceed through project completion, estimated for June 26, 2012.

Manage the project scope, schedule, budget, and stakeholder involvement. This includes, but is not limited to the following:

- With input and approval from the Study Group, establish a Project Team consisting of contractor staff and County agency stakeholders. This team will review and comment on project deliverables and provide technical and policy input. *Completed.*
- Identify stakeholders who will be affected by the PSAP consolidation. *Completed.*
- Manage and coordinate activity with various stakeholders and with external partners such as EMS, Courts, the Department of Public Safety, the ARMER /911 Program, and others as identified above. *Completed.*
- Establish project time lines and budgets. *Completed.*
- Manage and conduct project meetings. This includes arranging meeting dates, times and locations, issuing invitations, preparing agendas and other meeting materials, and taking and issuing minutes. It is estimated that the project stakeholder team will meet a minimum of six times over the course of the project. *Completed.*
- Prepare project progress reports as needed. *Ongoing through project completion.*

Phase 1 – Detailed Analysis and Feasibility Study

The Phase I – Detailed Analysis and Feasibility Study Report is completed and delivered to the PSAP Study Group. Minor document edits await final publication with the full project document package.

Develop a PSAP Consolidation Analysis and Feasibility Study Report. The Report will gather and provide detailed documentation of the current equipment, procedures, staffing, records management, and equipment capabilities of the eleven centers. The Report will investigate and report on what would be required to combine some or all of the functions of dispatch for these agencies. The analysis will establish the criteria for determining what number of centers is optimal, what determines the location of centers and levels of service, what technology requirements must be met, and the primary cost and personnel factors that influence the decision on communication center restructuring.

An Analysis and Feasibility Study Report document will be developed. The document will be reviewed by the Project Team to get their input and recommendations. The final report data will provide the basis for the Options Report development in Phase 2.

Phase 1 will require tasks such as:

Completed.

- Analysis of current conditions will include documenting existing communications center operations, services, technologies, operational costs, staffing levels, service levels, and geographic distribution. At a minimum the analysis will address the following: Radio Equipment, Operating Procedures, Costs/Budgets, Staffing, Records Storage, Records Access, Call Volumes, Equipment capabilities, System and Procedure compatibility.

Completed.

- Determine political feasibility of consolidation. A survey will be developed, distributed, collected and tabulated to investigate and explore the political feasibility, obstacles, willingness, and pitfalls that make up the current political landscape in the agencies participating in the study.

Completed.

- Analyze the technical feasibility of consolidation. This analysis will also aid in the development of communication center requirements (staffing levels, call volumes, service requirements, as well as technology requirements such as telephone, logging, CAD/RMS, dispatch consoles, paging, weather, warning systems, interface to ARMER, etc.).

Completed.

- Prepare a draft Analysis/Feasibility Report document and distribute it to the project team for review and comment.

Completed.

- Address comments made in relation to draft Report, and then prepare and submit the final Analysis/Feasibility Report to the Study Group.

Completed.

- The final report is intended to provide the starting point for Phase 2 – Options Report.

Phase 2 – PSAP Consolidation Options Recommendation Report

The Phase 2 – PSAP Consolidation Options Report is 90% complete and currently under review by the PSAP Study Group. Final document completion is scheduled for April 13, 2012.

In phase two of the project we will proceed into something similar to a business/strategic planning phase for the consolidated dispatch and records management services. In this project phase we will develop and explore various options and models for consolidation or restructuring the dispatch services. This phase will outline the vision and goals of the consolidation project. This phase will create dispatch levels of service, and operational procedures will be explored and recommended. This phase could define the concept of operation for the center and also could include some preliminary design for the centers.

Tasks to be completed in the phase 2 are:

Completed.

- Establishing business objectives and mission/vision alignment.

Completed.

- Define communication center customers and customer needs.

Completed.

- Define consolidation model options.

Completed.

- Define business needs or opportunities.

Completed.

- Document communication center products and services.

Completed.

- At a minimum include recommendations covering the following factors: Dispatch Services; Dispatch Location(s); Records Storage; Records Access; Service Levels; Staffing; Procedures; Radio, dispatch and record hardware and software requirements; Costs and cost sharing;

Completed.

In Process – Scheduled completion April 13, 2012.

In Process – Scheduled completion April 13, 2012.

- Prepare a draft PSAP Consolidation Options Recommendation Report document and distribute it to the project team for review and comment.
- Address comments made in relation to draft Recommendation Report, and then prepare and submit the final PSAP Consolidation Recommendation Options Report to the Study Group.
- The final report is intended to provide the starting point for Phase 3 – PSAP Consolidation Implementation Plan Report.

Phase 3 – PSAP Consolidation Implementation Plan Report

The Phase 3 – PSAP Consolidation Implementation Report is in process with final completion scheduled for April 30, 2012.

The final phase will provide detailed documentation for how to proceed with the recommendation in Phase 2 of the project. The implementation Plan will investigate dispatch locations, and establish project and operations costs and cost sharing models. Governance structures will be proposed and political considerations such as joint ownership/operational models will be documented. The timing and possible phasing of the implementation shall be considered in this phase of the project, along with an analysis of the pros and cons of each optional implementation plan.

Some typical tasks in the phase 3 are:

In Process.

- Develop implementation plan and schedule options, timeline activities and budget estimates, and resource requirements for PSAP consolidation – (team and support resources).

Included in Phase 2 Report.

- Determine and document Governance and structural arrangements; Political considerations; Multi-jurisdictional interoperability.

Included in Phase 2 Report.

- Determine projected costs and funding options.

In Process.

- Establish migration project deliverables, completion criteria, risk assessment and mitigation strategies, constraints, and dependencies.

In Process.

- Create a responsibilities matrix to identify specific activities required to accomplish the migration.

In Process.

- Create a table to document the pros and cons of each implementation alternative.

In Process.

- Prepare draft Implementation Options Report document and distribute it to the project team for review and comment.

Completion Scheduled April 30, 2012

- Address comments made in relation to draft Implementation Options Report analysis, and then prepare and submit the final Implementation Options Report to the Joint Dispatch Study Group.

Completion Scheduled April 30, 2012.

- The completed Implementation Options Report, along with the Assessment Report and Recommendations Report, will then be presented.

Southeast PSAP Consolidation, Glossary of Terms

ALI - Automatic Location Identification, an enhanced electronic location system that automatically relays a caller's address when they call an emergency responder service such as 911, whether they call from a mobile phone or a land line.

ANI - Automatic Number Identification, the system capability to identify automatically the calling telephone number and to provide a display of that number at any public safety answering point.

ARMER - Allied Radio Matrix for Emergency Response, a digital trunking radio system in operation throughout Minnesota that operates in the 800 MHz range.

AVL - Automatic Vehicle Location, a means for automatically determining the geographic location of a vehicle through the use of the Global Positioning System (GPS) and transmitting the information to a requester.

CAD - Computer Aided Dispatch, a method of dispatching taxicabs, couriers, field service technicians, or emergency services assisted by computer and aids PSAP dispatchers by automating selected dispatching and record-keeping activities.

E-911 - Enhanced 911 , an emergency telephone system that includes network switching, database, and CPE elements capable of providing selective routing, selective transfer, fixed transfer, caller routing and location information, and ALI. It will enable mobile, or cellular, phones to process 911 emergency calls and enable emergency services to locate the geographic position of the caller.

GIS - Geographic Information System, A computer software system that enables one to visualize geographic aspects of a body of data. It contains the ability to translate implicit geographic data (such as a street address) into an explicit map location. It has the ability to query and analyze data in order to receive the results in the form of a map. It also can be used to graphically display coordinates on a map (i.e., latitude and longitude coordinates) from a wireless 9-1-1 call.

GPS - Global Positioning System, a satellite-based location determination technology (LDT).

Mobile Data - Also known as wireless data, transmission of data via air waves. It includes paging, text messaging, e-mail, Web access and other specialized data applications and specifically excludes voice transmission. Wireless data typically implies transmission to a mobile terminal such as a smartphone or PDA; however, there are "fixed wireless" applications that transmit over the air between stationary objects.

MDC - Mobile Data Computer or Mobile Data Terminal (MDT) is a vehicle-mounted device that facilitates messaging, electronic dispatching, vehicle monitoring, and GPS-based vehicle tracking, car-to-car communications, and criminal justice database inquiries.

Mobile Mapping - The process of collecting geospatial data from a mobile vehicle,typically fitted with a range of photographic, radar, laser, LiDAR or any number of remote sensing systems.

State NCIC Interface - State and national crime information, the interface facilitates instant access to local, state and national crime information databases at selected workstations on the network and in every AMO attached vehicle or mobile computer. Connection can be by a dedicated direct telephone link to the state computer system, or by cable connection to an existing properly configured Enforcer terminal. Inquiries transmitted to the state systems are also forwarded to the National Crime Information Center (NCIC) database.

Rip and Run - Interface in CAD that automatically prints dispatch call information on printers. This application may be used at fire stations enabling fire personnel to "rip and run.

PSAP - Public Service Answering Point, a physical location where 911 emergency telephone calls are received and then routed to the proper emergency services.

TTY/TDD - Text Telephone Type/ Telecommunication Device for the Deaf . A telecommunications device consisting of modems that permit typed telephone conversations with or between deaf, hard of hearing or speech impaired people.

Wireless - Any commercial mobile radio service (CMRS) that falls under the FCC's Docket 94-102 requirement for wireless enhanced 9-1-1 service.

Wireline - A communication or technology, connected by cable or wire; the opposite of wireless. Also known as Landline.

Potential Expansion Space at Existing PSAPs

Potential Expansion Space Available At Existing PSAPS

April 11, 2012

Goodhue County Law Enforcement Center	Square Feet
Dispatch Center	626
Equipment Room	241
Dispatch Supervisors Office	149
Bathroom (in current dispatch center)	57
Offices Adjoining Large Conference Room	612
Large Conference Room (Future Dispatch Center)	1500
EOC Area	240
Bathroom (in large conference room area)	120
Total Square Feet	**3545**

Wabash County Law Enforcement Center	Square Feet
Dispatch Center	530
Equipment Room	171
Records Area	565
Bathroom (in current dispatch center)	90
Admin Area	360
Dispatch Supervisors Office	120
Break Room	144
Storage Area	30
Total Square Feet	**2010**

Steele County Law Enforcement Center	Square Feet
Training/Conference Room (Potential new dispatch area)	1120
Locker Room	927
Conference Room	457
Kitchen	162
Men's Bathroom	162
Women's Bathroom	162
Supervisors Office (Existing Conference Room)	180
Police Storage	288
Fitness	216
Changing Rooms and Showers	361
Total Square Feet	**4035**

Olmsted County (Proposed New Center)	Square Feet
Local Dispatching Area	1440
Dispatch Training Office	120
Dispatching Supervisor Office	120
Dispatching Manager Office	120
Computer, Phone and Electrical Room	900
Conference Room/Break Room/Kitchen	270
Locker Room	300
Computer Server Room (Fire, Police & City)	320
Total Square Feet	**3590**

Freeborn County	Square Feet
Dispatching Area	651
Equipment Room	257
Bathroom (in current dispatch center)	80
Break Room	163
Conference Room	100
Open Office Space Available For Remodeling	660
Total Square Feet	**1911**

SE Mn PSAP Consolidation Study – PowerPoint Presentation to the SE RRB – April 2, 2012

Southeast Minnesota Regional PSAP Consolidation Study

Presented to the SE RRB

April 2, 2012

SEH

SE PSAP Study – About the Project

- 3- Phases
- Study Group Involvement
- Current Status
- Process

SE PSAP Study – About the Project

- Primary Business Drivers
  - Customers / Products and Services
  - Management and Organization
    - Staffing / Org Chart
  - Technology / Process Uniformity
  - Facility / Location
  - Cost Considerations
    - Initial - Ongoing
  - Other :
    - Governance
    - Funding

SE PSAP Study – About the Project

- Goals / Objectives
  - Improved Service Levels:
    - Reduce Transfer of 911 calls
    - Standard Operating Procedures
  - Cost Savings thru Economies or Scale:
    - Coordinate Support Activities(Training, Public Education)
    - Implement Standard Technology (CAD, GIS, RMS)
  - Improved Communications Interoperability
    - Coordination of Agency activities
    - Better information sharing
  - Equity and Fairness in the Process and Outcomes
    - Governance / Cost Sharing
    - Employee Transition

SE PSAP Study – About the Project

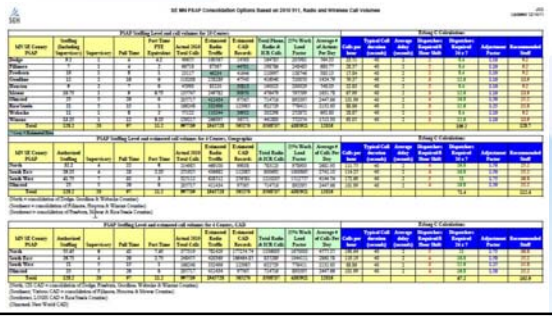
- Define PSAP Consolidation for Business Planning
  - Intra County
  - Multi County
  - **Regional**
  - Co-Location
  - Virtual

Phase 1 – Analysis and Feasibility Study

- Site Surveys and Interviews

Phase 1 – Analysis and Feasibility Study

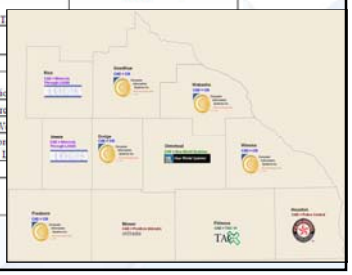
- Staff Modeling - Erlang C Calculations



Phase 1 – Analysis and Feasibility Study

Table 5
SE MN PSAP Technologies

MN SE County PSAP	Common Technology		
	Radio Console	CAD System	Audio Logging Vendor
Dodge	Motorola Gold Elite	CIS	Verint, analog
Fillmore	Motorola Gold Elite	T	
Freeborn	Zetron MCC 7500 to be installed		
Goodhue	Motorola MCC 7500		
Houston	Motorola Gold Elite, upgrading to MCC 7500	Poli	
Mower	Orbicom	Positr	
Olmsted	Motorola Gold Elite	New W	
Rice/Steele	Motorola MCC 7500	Motor	
Wabasha	Motorola MCC 7500		
Winona	Motorola Gold Elite, upgrading to MCC 7500		



Phase 1 – Analysis and Feasibility Study

- Survey on Feasibility of Consolidation
  - Political / Policy Maker
    - Improved service was primary benefit
    - JPA Governance 64%; Fee-for-Service 13%
    - Location not a factor 73%; 18 % only at my site
    - All staff offered positions 44%, Staff at designed level 34%
  - First Responder
    - Dispatcher knowledge or area and familiarity 78% vs 16%
    - Technology; 67% necessary; 23 desired,
    - Increased Staffing Levels 65%,
    - Increased Training for both Dispatchers and Responders 69%

Phase 2 – Business Plan and PSAP Options

- Options Presented in Business Plan

Table 1
PSAP Consolidation Options, Vote Results

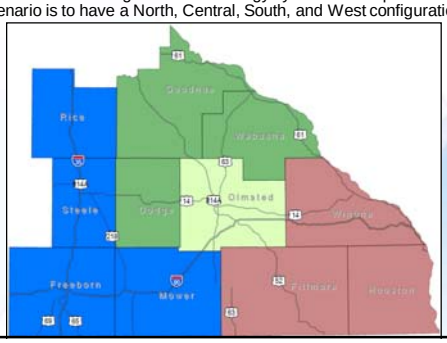
SE MN PSAP Consolidation											
Number of Centers	Dodge	Fillmore	Goodhue	Houston	Mower (not present)	Olmsted	Rice	Steele	Wabasha	Winona	Vote Totals
Virtual		X	X	X					X		4
9											0
8											0
7											0
6											0
5											0
4	X			X			X	X			4
3	X	X	X			X	X	X	X	X	8
2	X	X	X	X		X	X	X		X	8
1						X			X	X	3

Phase 2 – Business Plan and PSAP Options

- Business Plan Content
  - Consolidation Models
  - Goals/ Objectives
  - For Each Option
    - Geography and Alignment
    - Customers
    - Management and Organization
    - Product ant Service Description
    - Technology Considerations
    - Facilities / Physical Space
    - Migration and Operational Cost Estimate
  - Governance – Cost Distribution
  - Funding Options

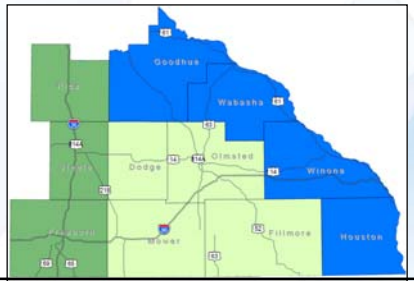
Phase 2 – Business Plan and PSAP Options

- **4 Center Option.** Four centers configured based on balancing call volumes and existing shared technology systems. One possible scenario is to have a North, Central, South, and West configuration.



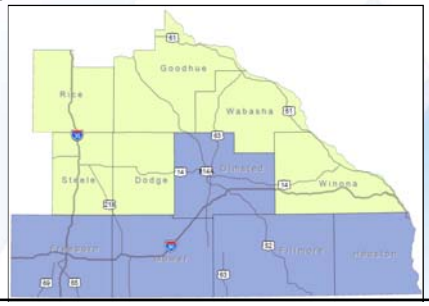
Phase 2 – Business Plan and PSAP Options

- **3 Center Option.** Three centers aligned based on common geographic and operational considerations such as the major transportation corridors. One likely scenario is to create an I -35 Corridor Center, a Mississippi River - Hwy 61 Corridor Center, and a Central region - Hwy 52 / I-90 Corridor Center.



Phase 2 – Business Plan and PSAP Options

- **2 Center Option.** Two centers would strive to balance the call volumes, population and geography of the region. The centers would likely be linked and provide back-up within the region. A North – South configuration is shown.



Phase 2 – Business Plan and PSAP Options

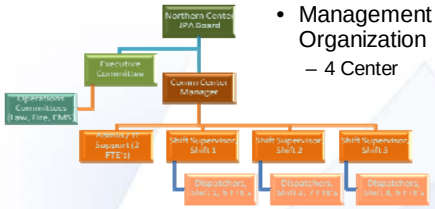
- Customer Example
  - 4 Center Southeast

4-Center Option, Geographic, Southeast Center Customers

Agency:	Law	Fire	EMS	Other
County:				
Fillmore	• Fillmore County Sheriff • Preston PD • Chatfield PD • Rushford PD • Fountain PD • Ostrander PD	• Canton FD • Chatfield FD • Fountain FD • Harmony FD • Lanesboro FD • Mabel FD • Ostrander FD • Preston FD • Rushford FD • Spring Valley FD • Wykoff FD	• Spring Valley Ambulance • Chatfield Ambulance • Preston Ambulance • Lanesboro Ambulance • Harmony Ambulance • Mabel Ambulance • Rushford Ambulance • Wykoff Fire Responders • Ostrander Fire Responders • Gold Cross Ambulance • Tri-State Ambulance • Lanes Ambulance • Life 1 helicopter (~ Out of County)	• Has a contract with Highway Department • Jail services • Window contact for customers • Sports contract • Transcriptions, Radio, DTD, tapes of 911 calls for courts • Grant extension (not all communities) for Preston, Canton, Fountain & Wykoff • Enter warrants from the courts • Enter all ICR (CTS) • Same state panel dispatching • Page for any one in the 507 prefix
Houston	• Houston County Sheriff • La Crescent PD • Reshaw PD • Houston PD • Caledonia PD • Spring Grove PD	• La Crescent FD • Reshaw FD • Houston FD • Caledonia FD • Spring Grove FD • Eitzen FD • Brownsville FD	• Houston • Caledonia • Spring Grove • Van Wert Fire & Ambulance	• Backup jailer for the entire jail • Genoa Nuclear plant (decommissioned, radio net) • Grant extensions • One court security • Courts logistics • Barnes 911 • Dispatcher controls elevator, jail, ports, doors, etc • Communication with Highway Dept (work dispatch), & Environmental Services
Winona	• Winona County Sheriff • Winona PD • Goodview PD • Lewiston PD • St. Charles PD	• Winona FD • Goodview FD • Minnesota City FD • Rolling Stone FD • Lewiston FD • St. Charles FD • Witsen FD • Stockton FD • Wykoff FD • Rushford FD • La Crescent FD • Altura FD • Dakota FD • Hidden Valley FD • Plainview FD	• Stockton & Elba Ambulance • Winona • Altura • Lewiston • St. Charles • Witsen • Rushford • Plainview (fire and ambulance) • Air EMS - Wykoff & Mayo	• County Admin • Winona County Highway Department • Dr. Fish & Wildlife • Courts Security • Winona City Course • Jail Central Point (doors), monitor facilities

Phase 2 – Business Plan and PSAP Options

- Management and Organization Example
  - 4 Center

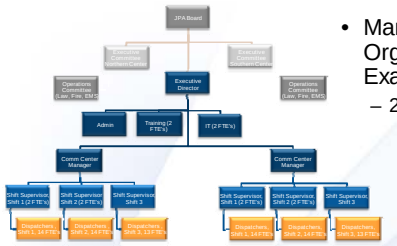


Staffing Benchmark Comparison Tables - 4 Center Option

4 Center, Geographic					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
North	87946	214983	32.2	25.2	Bloomington	83238		16	29.25	
					Carver Co.	91042		17		
					Outagamie Co., WI		213771	33		
					Waukesha Co. WI		218696	31		

Phase 2 – Business Plan and PSAP Options

- Management and Organization Example
  - 2 Center



2 Center, North/South					Comparison To Existing PSAP					
PSAP	Population	Call Volume	Current Staff	Erlang Consolidated Staff	PSAP	Population	Call Volume	Staff	Staffing Average	Notes
South	254559	477289	61.75	50.4	Washington Co.	238136		31	44.00	
					Red River	208777		37		
					Anoka		307700	42		
					DCC		300431	66		

(South Consolidation of Freeborn, Fillmore, Houston, Mower, & Olmsted Counties)

Phase 2 – Business Plan and PSAP Options

PSAP Products and Services

- Services that would be included:
  - E9-1-1 call taking / call transfers
  - Emergency responder radio dispatching (Police, Fire, EMS)
  - After hours agency specific administrative phone line call taking *
  - Creation and updating of CAD system records
- Services that would NOT be included:
  - Standard business hours administrative call taking*
  - Customer window
  - Support for jail operations
  - After hours building access or facility monitoring

Phase 2 – Business Plan and PSAP Options Technology Considerations

3 Center Option: Transportation, Hwy 61 PSAP, Current CAD Systems

CAD	Goodhue (CIS)	Houston (No CAD*)	Wabasha (CIS)	Winona (CIS)	Consolidate PSAP Required CAD Features
911 ANI/ALI Interface	YES	N/A	YES	YES	Required
State/NCIC Interface	YES	N/A	YES	YES	Required
Other Interfaces (MDC)	YES	N/A	NO. MDC	NO	Required
Alphanumeric Paging	NO. Not via CAD	N/A	NO. Consoles	YES	Required
Automatic Vehicle Location	YES	N/A	NO	NO	Required
Emergency Medical Dispatch	NO	N/A	NO	NO	Not Required
Fire Mobile Data	NO	N/A	NO	NO	Not Required
Fire Station Alerting	NO	N/A	NO. VHF paging agency incident log	NO	Not Required
Fire/EMS Records Management	YES. Track basic ICR	N/A	YES. ICR	YES	Required
Mobile Mapping	YES	N/A	YES	YES	Required
Police Mobile Data	YES	N/A	NO	YES	Required
Police Field Reporting	YES. Use CIS via Citrix	N/A	YES. Partial, word processing only	YES	Required
Police Records Management	YES	N/A	YES	YES	Required
Radio Console/System – Push-to-Talk/Emergency	Yes	N/A	NO	NO	Required
Rip & Run	NO. Have capability, not used	N/A	NO	YES	Required
TDD/TTY	NO. Not in CAD (it's on the phone)	N/A	YES	NO	Required

* Houston County does not use CAD but has RMS Police Central for ICR and jail information.

Phase 2 – Business Plan and PSAP Options Technology Considerations

Current Dispatch Console System Comparison, 3 Center Option

3 Center Option: Transportation, Hwy 61 PSAP, Current Radio Console System				
County	Goodhue	Houston	Wabasha	Winona
Radio Console	Motorola MCC 7500	Motorola MCC 7500	Motorola MCC 7500	Motorola MCC 7500

3 Center Option: Transportation, I 90/94 PSAP, Current Radio Console System				
County	Dodge	Olmsted	Mower	Fillmore
Radio Console	Motorola Gold Elite	Motorola Gold Elite	Orbicom	Motorola Gold Elite

3 Center Option: Transportation, I 35, Southeast PSAP, Current Radio Console System		
County	Freeborn	Rice/Steele
Radio Console	Zetron, MCC 7500 to be installed	Motorola MCC 7500

Phase 2 – Business Plan and PSAP Options Facilities / Physical Space

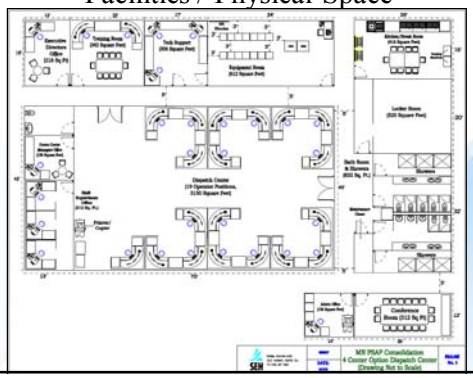
Facility Space Requirements Recommendation, 4 Center Option

	Work Stations *	Dispatch Center Manager Office	Center Deputy Manager Office	Dispatch Supervisors Office	Break Room/Kitchen	Conference Room	Admin Office/Copy and File Room	Equipment Room *	Equipment Room and Maintenance Shop Space	Locker Rooms	Exit Interviewed Dressers	Public Bath Rooms	Roll Call Training Room	Building Circulation 10%	Building Services 12%	Gross Building Square Feet
4 Centers																
North																
Quantity	10	0	1	1	1	1	1	10	1	1	2					
Size (sq ft)	150	0	150	150	300	300	150	15	250	400	200					
Total	1500	0	150	150	300	300	150	150	250	400	400	0	4100	615	492	5128
Southeast																
Quantity	10	0	1	1	1	1	1	10	1	1	2					
Size (sq ft)	150	0	150	150	300	300	150	15	250	400	200					
Total	1500	0	150	150	300	300	150	150	250	400	400	0	4100	615	492	5126
Omahead																
Quantity	10	0	1	1	1	1	1	10	1	1	2					
Size (sq ft)	150	0	150	150	300	300	150	15	250	400	200					
Total	1500	0	150	150	300	300	150	150	250	400	400	0	4100	615	492	5125
Southwest																
Quantity	10	0	1	1	1	1	1	10	1	1	2					
Size (sq ft)	150	0	150	150	300	300	150	15	250	400	200					
Total	1500	0	150	150	300	300	150	150	250	400	400	0	4100	615	492	5125

* Assumptions:
- Workstations from square footage calculated at 150 sq ft per workstation.
- Equipment Room calculated at an average of 22 sq ft per unit.

Space needs
- 4 Ctr: 5125 sq. ft
  : 5875 sq. ft
- 3 Ctr: 5188 sq. ft.
  :5938 sq. ft.
- 2 Ctr: 8563 sq. ft.

Phase 2 – Business Plan and PSAP Options Facilities / Physical Space



Phase 2 – Business Plan and PSAP Options Migration and Operations Cost Estimate

Northern Region

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) .5P1/N+.25*Pop+.25*Vol
Rice/Steel County	100,728	41.9%	422,728	33.7%	21.00	$1,177,889	$48,814	$1,819,751					$1,749,345	$1,409,490	$1,306,668
Goodhue County	46,183	19.2%	416,044	33.1%	12.00	$760,567	$63,381	$897,699					$801,845	$908,979	$851,276
Wabasha County	21,676	9.0%	201,298	16.0%	11.00	$679,811	$61,620	$712,608					$676,441	$446,571	$625,221
Dodge County	20,087	8.4%	164,700	8.0%	9.00	$440,008	$48,887	$485,008					$446,896	$371,907	$397,200
Winona County	51,461	21.4%	441,883	21.9%	13.00	$604,594	$46,714	$664,600					$693,711	$997,298	$688,755
Total	240,135	100.0%	1,847,751	100.0%	66.00	$4,064,679	$59,967	$4,897,935	50	$3,000,000	$889,585	$4,170,193	$4,170,193	$4,170,193	$4,170,193

Southern Region

County	Population	Pop %	Total Activity	Activity %	Staff	Staff Costs	Avg Staff Cost	Center Costs	Consolidated Staff Count	Staff Cost (High Average)	Center overhead costs + 20%	Full Center Costs	Cost Share (Pop)	Cost Share (Volume)	Cost Share (Mixed) .5P1/N+.25*Pop+.25*Vol
Olmsted County	144,248	56.7%	718,728	43.0%	25.00	$1,918,400	$76,736	$2,108,204					$2,613,360	$38,614	$1,810,770
Freeborn County	31,255	12.3%	110,997	6.7%	10.00	$432,228	$42,223	$743,728					$566,296	$388,223	$479,351
Mower County	38,243	15.0%	478,476	28.7%	10.75	$651,074	$77,009	$812,594					$709,176	$1,023,861	$969,189
Fillmore County	20,866	8.2%	196,786	11.8%	7.00	$350,000	$50,000	$376,000					$376,062	$551,986	$493,719
Houston County	19,027	7.5%	160,023	9.6%	8.00	$494,514	$64,946	$512,314					$344,361	$444,202	$456,449
Total	254,139	100.0%	1,665,009	100.0%	61.75	$3,846,216	$60,183	$4,638,614	50	$3,000,000	$746,785	$4,112,186	$4,612,246	$4,612,246	$4,612,246
										$7,246,249	$1,636,290	$8,782,439			

Region 10 Center TOTAL =	$9,686,547
Region 2 Center Total =	$8,782,439
Possible Annual Savings ** =	$904,108

** Savings does not account for cost of staff or services retained by existing agencies for administrative or non-dispatch associated tasks.

Phase 2 – Business Plan and PSAP Options

Migration and Operations Cost Estimate

Estimated Migration and Operational Costs, 3 Center Option

Physical Space/Remodel Costs	Estimates Capital Costs (1 Sites, No change at Olmsted)	Estimated Annual Operational Costs (4 Sites)
Remodel Cost @ $80 - sq ft, includes the following: (5030 sq ft @ 2 sites; 5188 sq ft @ 1 site)		
Dispatch Center		
Supervisor Offices		
Equipment Room		
Raised Flooring		
Electrical		
Security		
Generator/UPS		
Sub Total:	$1,365,120	

Staffing	Estimates Capital Costs	Estimated Annual Operational Costs
Relocation Costs	(TBD)	
Staffing (assuming high average)		$8,011,431
Other		
Sub Total:	(TBD)	$8,011,431

Technology	Estimates Capital Costs (4 Sites)	Estimated Annual Operational Costs (4 Sites)
Center Technology Costs:		
Upgrade Gold Elite Consoles (5 positions)	$150,000	
Dispatch Console Furniture (10)	$380,000	
Digital Logging Recorder Upgrades	$450,000	
E-911 Phone System Upgrades	$450,000	
Geographic Information System (GIS) Integration	$300,000	
CAD system upgrades/integration	$450,000	
Mobile Data Systems in A/L/S/PS (Wabasha, Dodge, Fillmore, Houston)	$1,000,000	
Backup Systems	$150,000	
Relocate Existing Center Electronics	$150,000	
Connections to Legacy Systems	$300,000	
Repairs, Allocations, Maintenance and other Operating Costs (based on existing Maintenance costs + 20%)		$1,630,290
Sub Total:	$3,780,000	$1,630,290
4 Center Option Grand Total:	$5,145,120	$8,547,771

Original 10 Center Ops Cost = $9,480,520
Delta = $935,777
Estimated Payback = 5.7 years *

Phase 2 – Business Plan and PSAP Options Migration and Operations Cost Estimate

# Ctrs	Staff	Capital Costs	Operations Cost	Delta	Payback
10	128.2	--	$ 9,446,547	--	--
4	112	$5,049,375	$ 9,480,529	$ 33,981	None
3	100	$5,145,120	$ 8,547,770	$ 898,777	5.7 yrs
2	100	$7,065,710	$ 8,782,439	$ 664,108	10.6 yrs

** Note: This is a very basic cost comparison, no inflation escalators, interest payments, or net present value calculations were done to determine payback period.

Phase 3 – Implementation Plan

- Report in Process:
  - Project Schedule / Time line
  - Migration Project Deliverables / Risks
  - Responsibility Matrix

Southeast Minnesota Regional PSAP Consolidation Study

QUESTIONS / DISCUSSION

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SEH