

CITY OF HUDSON

NEEDS ASSESSEMENT & STRATEGIC PLAN

MCM CONSULTING GROUP, INC.
MARCH 12, 2019

INTRODUCTION

- Public Safety Answering Point (PSAP) technology is due for an upgrade. A PSAP is a location that receives emergency 911 calls and dispatches emergency services.
- Recent legislative changes have created uncertainty in 911 centers.
- Public safety radio systems have grown in different directions.
- MCM Consulting Group, Inc. (MCM) was hired to conduct a needs assessment and create a strategic plan to assist prioritizing radio and PSAP technology upgrades

MCM CONSULTING

TEAM MEMBERS (ON SITE)

- Michael C. McGrady, President
- Jason Roblin, Senior Consultant, PMP
- Michael Crago, Senior Consultant, AE
- Gary Ryan, Advising Consultant

METHODOLOGY

- Project team developed
- Site visits - equipment reviewed
- Focus group interviews
 - Fire and EMS, Police, Dispatchers
- Review and analysis of current PSAP operations:
 - Agencies served
 - Call/dispatch volumes, ancillary services
 - Budgets, staffing, supervision

FOCUS GROUP INTERVIEWS

Intent

- Determine how the dispatchers and field users view:
 - PSAP technology
 - Radio systems in use
- Identify hopes and concerns of employees

Responses- Operational

- Dispatch staff feel there is a need to upgrade the current equipment, particularly the 911 call handling equipment.
- Current staff is very knowledgeable of the geography and locations within the area the PSAP dispatches for.

FOCUS GROUP INTERVIEWS

Responses- Operational (continued)

- Staff believes they could be more efficient with the CAD system. (Are there additional functions available?).
- The new city phone system was implemented with limited instructions.
- 800MHz radios seem to have better coverage especially within building.
- The ANI/ALI information is not integrated with CAD.
- The staff believes they are customer service focused and perceived well within the community.

FOCUS GROUP INTERVIEWS

Responses- Operational (continued)

- The chairs and office equipment should be upgraded.
- The use of pagers versus the cell phone “I am responding” app have a difference in time of notification.
- Policies and procedures as well as the training manual should be updated. Some are in process now.

FOCUS GROUP INTERVIEWS

Responses- Operational (continued)

- Overall, the staff is pleased with the performance of their peers and interactions with management.
- Overall, staff is pleased with the manner in which they are compensated.
- The fire service providers are confident in the services provided by the PSAP.

PSAP TECHNOLOGY REVIEW 1 OF 4

- Scope of Work Assumptions
- Hudson's PSAP is currently a standalone technology PSAP.
- Hudson's PSAP may be interested in regionalizing technology and/or services.
 - Who to partner with is being researched.
- Hudson's PSAP is not interested in a full consolidation outside its current location at this time.

Definitions of each level of PSAP consolidation are in the presenter's notes.

PSAP TECHNOLOGY REVIEW 2 OF 4

- 911 Call Handling Equipment (CHE)
 - Past end of life. No maintenance contract available.
 - Cannot share X,Y location of wireless caller to GIS mapping.
 - Cannot provide statistics required by Ohio PSAP rules.
- Dispatch Radio Consoles
 - Past end of life, parts hard for vendor to locate.
 - Mechanical push buttons with copper wire fail periodically.

PSAP TECHNOLOGY REVIEW 3 OF 4

- Computer Aided Dispatch (CAD)
 - Current program is functional. Some features not working properly. Refresher training is recommended.
 - Plan a path to join the Summit County CAD system. It is more feature rich and would benefit situational awareness increases.
- Emergency Medical Dispatch (EMD)
 - Current program is functional, but is not integrated into CAD.
 - Upgrade to Emergency Police and Fire protocols is recommended.
 - Most other Summit County PSAPs use a different vendor. Efficiencies exist if Hudson used the same.

PSAP TECHNOLOGY REVIEW 4 OF 4

- Mass notification system
 - Fire department uses Code Red. Training of dispatchers is needed.
- Dispatch furniture
 - Current radio consoles demand more physical space. Redesign of space based upon dispatcher workflow is recommended at time of radio console replacement.

RADIO SYSTEMS REVIEW 1 OF 3

- Hudson PD moved to the county-owned 800MHz system May 2014.
- Hudson Fire and EMS continued to improve the existing 420MHz system.
- Since then, most of the surrounding communities have moved to the 800MHz system as well.

RADIO SYSTEMS REVIEW 2 OF 3

- Interoperable communications issues have grown out of this divergence
 - Hudson Fire and EMS purchased some 800MHz radios to mitigate the issues
- MCM conducted field testing for signal strength and voice quality for both UHF and 800MHz systems.

RADIO SYSTEMS REVIEW 3 OF 3

- It is the recommendation of MCM that Hudson Fire and EMS plan and implement a migration to the 800MHz system.
 - Remainder of 2019, plan the migration
 - Continue testing functionality
 - Paging
 - In-building amplification priority list
 - Revise communications policies
 - Daily usage, mutual aid scenes
 - Train personnel

RADIO MIGRATION COST

Radios needed:

76- Portable Radios

2- Mobile Radios

90- Pagers

- If EF Johnson radios are selected: **\$252,659.52**
- Various Motorola radios could increase cost up to \$623,176.00
- Upgrade of High School amplification unit is needed: **\$10,000.00**
- **Total recommended cost \$262,659.52**

COUNTY RADIO SYSTEM ACCESS COST

	Police	Fire	EMS	All Agencies
Portable	34	40	36	
Mobile	10	19	7	
Base	0	1	1	
Dispatch	2			
School	1			
Total	47	60	44	
\$20/ unit	\$940	\$1200	\$880	\$3,020
Current Cost	\$940	\$380	\$140	\$1,440
Additional Cost	\$0	\$820	\$740	\$1,560
Annual Increase	\$0	\$9,840	\$8,880	\$18,720
Annual Totals	\$940	\$14,400	\$10,560	\$25,900

PSAP UPGRADE COSTS

Priority	Component	Vendor	Cost
1	911 System	Vesta (formerly Airbus - now Motorola)	\$266,358.00
2a	Radio Consoles	Motorola Solutions, Two Positions + Laptop Backup	\$439,791.00
2b	Microwave System	Aviat Networks	\$85,344.00
2c	Voice Recorder Integration	Sound Communications	\$6,000.00
3a	CAD Training & Capability Gap Analysis	Sundance Systems	\$5,000.00
3b	County-wide CAD Participation	Summit County DPS (Tyler)	\$299,241.00
3c	New PC's for CAD, RMS, etc.	T.B.D.	\$3,000.00
4a	Upgrade to EMD, EFD & EPD with CAD interface	PowerPhone	\$49,330.00
4b (option)	Upgrade to EMD, EFD & EPD with CAD interface	Priority Dispatch, ProQA (used by most Summit County PSAPs)	\$79,472.00
4c	EMD/CAD interface	Sundance	\$7,600.00
5	Dispatcher Training	In-House for CodeRed	\$0.00
6a	Dispatch Furniture	Eaton - Wright Line; Two Positions	\$45,849.18
Immediate Need:			\$859,423
Total PSAP Recommendations:			\$1,237,655.18

PSAP ANNUAL MAINTENANCE

Priority	Component	Average Annual Maintenance	Replacement Interval	Replacement Cost
1	911 System	\$18,737	CPE refresh at 5 years	\$8000
2a	Radio Consoles	\$5,613	Hardware refresh at 5 years	\$8000
3b	County-wide CAD Participation	\$41,971	20+ years, evergreen product	N/A
4a	Upgrade to EMD, EFD & EPD with CAD interface	\$4,785	N/A	
4b (option)	Upgrade to EMD, EFD & EPD with CAD interface	\$2,400 \$5,850	N/A	
6a	Dispatch Furniture		10-15 years	\$45,849.18

RECOMMENDATIONS

Immediate Term, 0-6 Months

- Implement RapidSOS Light.
- Schedule a demo with current CAD provider.
 - Gap analysis
- Provide in-house training to dispatchers on the Code Red mass notification system.

RECOMMENDATIONS

Immediate Term, 0-6 Months (continued)

- Continue discussions with neighboring PSAPs to share technology.
- Review and obtain additional information regarding the migration of fire and EMS services onto the 800MHz trunked radio system.
 - Test Paging on 800MHz
 - Plan
 - Daily radio usage (include firegrounds)
 - Mutual Aid usage
- Plan PSAP strategy.

RECOMMENDATIONS

Medium Term, 6 Months through Year 2

- Revise 911 call taking procedures, dispatch procedures and MOU's between PSAPs to reduce call transfer delays.
 - Whether at the current PSAP or neighboring PSAP, the transfer of 911 calls will be needed. The inherent delay could be reduced through policy and procedure revisions.
- Train PSAP employees on revised 911 call taking procedures, dispatch procedures and MOU's between PSAPs.
 - Training of all employees should follow the acceptance of the revised standards.

RECOMMENDATIONS

Medium Term, 6 Months through Year 2

(Continued)

- Call taking, dispatch and emergency medical dispatching (EMD) protocols should be integrated with CAD. Explore the potential to add fire and law enforcement.
 - Explore switching EMD vendors to Priority Dispatch. Efficiencies exist in EMD program administration and training as many other PSAPs in Summit County use this vendor.
- Continue testing for migration of fire and EMS services to the 800MHz system.

RECOMMENDATIONS

Medium Term, 6 Months through Year 2

(Continued)

- Provide training for migration of fire and EMS services to the 800MHz system.
 - Radio functionality
 - Operational policies, procedures and usage
 - Mutual aid policies and procedures
- After successful testing and training, migrate fire and EMS radio usage to the 800MHz system.
- Execute PSAP technology upgrades needed for the selected PSAP strategy.

RECOMMENDATIONS

Long Term, Year 2 through 4

- Implement selected PSAP strategy.

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