Luzerne County 9-1-1 Operational Services Committee discussion

Several areas of Luzerne County 911 operations have been reviewed since my appointment to 9-1-1 Director, as of May 2nd, 2014. None of the discussion points mentioned within this document contributed to the Mocanaqua Fire incident, and specified topics were being looked at prior to the incident in question.

MOCANAQUA FIRE CALL

- Refer to press release issued by Solicitor Pedri. (Appendix A)

STANDARDIZED ADDRESSING

- Ongoing project since 1996 with LC911 involving 76 municipalities.
- 1 remaining municipality, currently in progress to be standard addressed, Bear Creek Township.
- This does not include sound alike road name issues and also duplicate range with same street name issues. There are many throughout the county. (Reference current MSAG documentation). (Appendix B)
- Under PA Commonwealth Borough and Municipal codes, the municipality has the authority and obligation to number buildings, address and name streets. Luzerne County has no authority to force changes within a municipality. Conyngham Township recently refused our request to change their Main Street. (Reference current standardized addressing ordinance).(Appendix C)
- With elections and changes in Municipal leadership, it's difficult to compile a list of cooperating municipalities. Where previous administration/municipal officials would not cooperate, current members may be willing now.
- Very difficult with our current staffing levels to be proactive in dealing with addressing and data issues. We are more reactive to the issues currently, and deal with them as they are discovered. We had a Data Department of 7 union staff in 2006. We now have 1 and a Data Manager. (Reference Kimball report 2007). (Appendix D)
- Since the postal service removed themselves from standard addressing in 2004, some of the municipalities in Luzerne County completed their own standardized addressing, while others relied on Luzerne County 911 to standard address for them. (Reference Address Management Services letter 2004). (Appendix E)
- While municipalities are directly responsible for addressing, LC911 Data Department is responsible for maintaining a master street address guide (MSAG), municipal address database, GIS/Map database, liaison to AMS/Postal officials and work with Verizon in maintaining a phone record database, making corrections where needed.
- Currently, we rely heavily on the GIS department for support and assistance.

STAFFING LEVELS

- Currently there is a staffing study being completed in conjunction with the regional shared services assessment (RSSA), as required by Pennsylvania Emergency Management Agency (PEMA). Current call volume, obligations and activity must be looked at. Estimated to be complete by end of September 2014.
- Kimball staffing report completed in 2007 recommended an additional 16 call takers (4 per shift) and 4 assistant PSAP Supervisors. This would bring the 2007 total staff complement to 115 staff.
- Kimball report/study was completed prior to us taking on dispatching services for Kingston police, fire and EMS, Hazelton police and Nescopeck Borough police, fire and EMS.
- Kingston and Hazleton are 2nd and 3rd busiest geographic regions within Luzerne County, based on current call volume.
- Call volumes were 100,000 less in 2007, as compared to 2013 total call volumes.
- We now have a total complement (budgeted FTE) of 77 compared to recommended 115 in 2007.
- There have been major technology shifts the past several years. With cell phones, citizens have the capability to dial 911 from virtually anywhere, versus landline technology of the past.
- Union mandated break and lunch schedules of 2- 15 minute breaks and 30 minute lunch. Reduces call taker levels to 3 during break and meal periods per shift (almost 5 hours per shift).
- We operate as a call taker/dispatch facility. (Reference July 2014 monthly statistical analysis report). (Appendix F)
- Comparison to York County 9-1-1 indicates a major difference in staffing levels, cost per call statistics, minimum staffing levels and PSAP operations. (Reference cost per call analysis and York County 911/LC911 comparison document). (Appendix G)
- Comparing minimum staffing levels to York County 9-1-1: 1st and 2nd shift 20, 3rd shift 18. LC911 is 12 for 1st and 2nd shift and 10 for 3rd shift. Kimball report recommended a minimum of 16 per shift in 2007, plus an assistant supervisor.
- We have some employees working 80 hours of overtime in a pay period. Chance for burn out and mistakes are high.
- Recently submitted a request for 8 part-time call taker positions, due to increase in funding and call volumes.
- Current dispatcher complement is at 52, with 6 vacancies. We are having difficulty finding and hiring suitable recruits for $25,500/yr.
- Difficult to find senior Telecommunicators from within to take PSAP Supervisor positions. Base pay of a PSAP Supervisor is $33,990. Senior Dispatchers are making almost $5,000 more than their immediate Supervisors per year.

911 FUNDING

- 911 management is sensitive to the current financial situation of Luzerne County. Do more with less mentality may be at critical levels for 911 operations.
- 2014-2015 wireless FY (July 1, 2014-June 30, 2015) will increase general fund reimbursements for 9-1-1 eligible salary and benefits costs by approximately $600,000.
- With this increase in wireless revenue, it is highly recommended that this be invested into 911 staffing levels and operations, if the upcoming staffing report recommends an increase. Typically in the past, any revenue increase was used to reduce general fund obligations.
- Act-78 rewrite sorely needed to cover increased PSAP operations costs, and reduce general fund obligations for Counties. Historically wireless and wireline revenue covers 70% of our total PSAP operational costs.

ALS-BLS MEDICAL SERVICES COUNTYWIDE

- Study and analysis currently underway (EMS Council), looking at the effectiveness of the Emergency Medical Service system within Luzerne County. Specifically, the study is looking at the units dispatched, use of resources and response times. Will be presented to State Legislators and the Commonwealth of PA Medical Director when complete.
- Municipalities have the authority and responsibility under Borough and Township Municipal codes to determine public safety agency services and units.

CONCLUSION

- Support and outreach to legislators by Council members on the importance of ACT-78 rewrite and legislation. This will increase our revenue for 9-1-1 PSAP operations, while reducing County general fund and taxpayer obligations.
- We cannot ignore the York County comparison of staffing levels versus LC911 personnel, as they are very similar in size and call volume to LC911.
- Council support where needed, in correcting address and road name issues with Municipalities. Report to be completed in the near future based on current, past and potential issues.
- More than ever, Luzerne County 9-1-1 needs the budgetary support of council for annual costs necessary to provide critical public safety services, if future staffing study recommends increased staffing.
- Much has been done to correct issues in a very short period such as training program changes, implementation of staff/shift meetings and involvement with policy creation, public advertisements in newspapers urging the public to know where they are when calling 911, specifically knowing their proper Municipality.

COUNTY *of* LUZERNE

PENNSYLVANIA
ESTABLISHED 1 7 8 6

MEDIA RELEASE
July 22, 2014

Luzerne County 911 has completed an internal investigation of calls taken on May 15, 2014 regarding a house fire located at 76 Main Street, Conyngham Township, Luzerne County.

This investigation has revealed Luzerne County's 911 computer-aided dispatch and phone system was in proper working order at the time of the incident and also revealed that Luzerne County 911's established policies and procedures were not a factor in the events of May 15.

Based upon this investigation, personnel disciplinary adjustments were made regarding employees involved in the dispatch of this call.

Since this incident took place, Luzerne County 911 has refocused the attention of 911 Supervisors and staff on training policies and procedures intended to prevent incidents such as this.

Further, Luzerne County 911 will continue working with municipalities to resolve street name and address concerns.

Finally, Luzerne County will continue educating the public regarding the importance of clearly stating location when reporting incidents via cell phone.

Roads That duplicate with Number, name, Suffix and alike Municipalities

E	BROAD	ST	1	59	HAZLETON CITY	PA	B	245	72514	LUZE
E	BROAD	ST	100	149	HAZLETON CITY	PA	B	245	72514	LUZE
E	BROAD	ST	1	49	WEST HAZLETON BORO	PA	B	245	72514	LUZE
E	BROAD	ST	100	139	WEST HAZLETON BORO	PA	B	245	72514	LUZE
W	BROAD	ST	1	49	HAZLETON CITY	PA	B	245	72514	LUZE
W	BROAD	ST	1	43	WEST HAZLETON BORO	PA	B	245	72514	LUZE
	CENTER	ST	1	187	PITTSTON CITY	PA	B	245	72514	LUZE	Overlap between 157 and 158
	CENTER	ST	157	219	PITTSTON TWP	PA	B	245	72514	LUZE
	CHERRY	ST	1	39	KINGSTON BORO	PA	B	245	72514	LUZE
	CHERRY	ST	1	85	KINGSTON TWP	PA	B	245	72514	LUZE
E	CHESTNUT	ST	1	199	WILKES BARRE CITY	PA	B	245	72514	LUZE
W	CHESTNUT	ST	1	149	WILKES BARRE CITY	PA	B	245	72514	LUZE	E vs W vs Plain
	CHESTNUT	ST	1	119	WILKES BARRE TWP	PA	B	245	72514	LUZE
E	CRANBERRY	AVE	1	29	WEST HAZLETON BORO	PA	B	245	72514	LUZE
E	CRANBERRY	AVE	101	135	WEST HAZLETON BORO	PA	B	245	72514	LUZE
E	CRANBERRY	AVE	201	229	WEST HAZLETON BORO	PA	B	245	72514	LUZE
E	CRANBERRY	AVE	100	149	HAZLETON CITY	PA	B	245	72514	LUZE
E	CRANBERRY	AVE	200	259	HAZLETON CITY	PA	B	245	72514	LUZE
	DAVIS	ST	60	117	KINGSTON TWP	PA	B	245	72514	LUZE
	DAVIS	ST	100	199	KINGSTON BORO	PA	B	245	72514	LUZE	overlap between 100-117
W	DIAMOND	AVE	1	45	HAZLETON CITY	PA	B	245	72514	LUZE
W	DIAMOND	AVE	100	149	HAZLETON CITY	PA	B	245	72514	LUZE
W	DIAMOND	AVE	200	259	HAZLETON CITY	PA	B	245	72514	LUZE
W	DIAMOND	AVE	300	350	HAZLETON CITY	PA	B	245	72514	LUZE
W	DIAMOND	AVE	400	435	HAZLETON CITY	PA	B	245	72514	LUZE
W	DIAMOND	AVE	500	547	HAZLETON CITY	PA	B	245	72514	LUZE
W	DIAMOND	AVE	600	749	HAZLETON CITY	PA	B	245	72514	LUZE
W	DIAMOND	AVE	800	849	HAZLETON CITY	PA	B	245	72514	LUZE
W	DIAMOND	AVE	900	944	HAZLETON CITY	PA	B	245	72514	LUZE
W	DIAMOND	AVE	1	945	WEST HAZLETON BORO	PA	O	245	72514	LUZE
	DIVISION	ST	1	179	KINGSTON BORO	PA	B	245	72514	LUZE
	DIVISION	ST	11	30	KINGSTON TWP	PA	B	245	72514	LUZE
	DIVISION	ST	1	179	KINGSTON BORO	PA	B	245	72514	LUZE	This is also listed with King Boro vs Twp
	DIVISION	ST	1	9	LARKSVILLE BORO	PA	B	245	72514	LUZE
	FAWN	DR	20	29	HAZLE TWP	PA	B	245	72514	LUZE
	FAWN	DR	1	27	WEST HAZLETON BORO	PA	B	245	72514	LUZE
	FERRY	ST	1	79	PLYMOUTH BORO	PA	B	245	72514	LUZE
	FERRY	ST	1	19	PLYMOUTH TWP	PA	B	245	72514	LUZE
E	GREEN	ST	1	49	HAZLETON CITY	PA	B	245	72514	LUZE
E	GREEN	ST	100	140	HAZLETON CITY	PA	B	245	72514	LUZE

	Street	Type	Low	High	Municipality	State		Code	ID	County
E	GREEN	ST	200	241	HAZLETON CITY	PA	B	245	72514	LUZE
E	GREEN	ST	1	44	WEST HAZLETON BORO	PA	B	245	72514	LUZE
E	GREEN	ST	100	143	WEST HAZLETON BORO	PA	B	245	72514	LUZE
E	GREEN	ST	200	243	WEST HAZLETON BORO	PA	B	245	72514	LUZE
W	GREEN	ST	1	49	HAZLETON CITY	PA	B	245	72514	LUZE
W	GREEN	ST	100	159	HAZLETON CITY	PA	B	245	72514	LUZE
W	GREEN	ST	200	249	HAZLETON CITY	PA	B	245	72514	LUZE
W	GREEN	ST	300	359	HAZLETON CITY	PA	B	245	72514	LUZE
W	GREEN	ST	400	459	HAZLETON CITY	PA	B	245	72514	LUZE
W	GREEN	ST	500	649	HAZLETON CITY	PA	B	245	72514	LUZE
W	GREEN	ST	84	129	WEST HAZLETON BORO	PA	B	245	72514	LUZE
W	GREEN	ST	200	247	WEST HAZLETON BORO	PA	B	245	72514	LUZE
W	GREEN	ST	300	349	WEST HAZLETON BORO	PA	B	245	72514	LUZE
W	GREEN	ST	400	445	WEST HAZLETON BORO	PA	B	245	72514	LUZE
W	GREEN	ST	500	549	WEST HAZLETON BORO	PA	B	245	72514	LUZE
	HOLLOW	RD	1	11	CONYNGHAM BORO	PA	B	245	72514	LUZE
	HOLLOW	RD	1	149	CONYNGHAM TWP	PA	B	245	72514	LUZE
	HOLLY	ST	1	89	HANOVER TWP	PA	B	245	72514	LUZE
	HOLLY	ST	1	59	WARRIOR RUN BORO	PA	B	245	72514	LUZE
	HOYT	ST	1	49	COURTDALE BORO	PA	B	245	72514	LUZE
E	HOYT	ST	1	239	KINGSTON BORO	PA	B	245	72514	LUZE
W	HOYT	ST	1	139	KINGSTON BORO	PA	B	245	72514	LUZE
	HOYT	ST	350	559	PRINGLE BORO	PA	B	245	72514	LUZE
	HUGHES	ST	1	74	FORTY FORT BORO	PA	B	245	72514	LUZE
	HUGHES	ST	1	127	LUZERNE BORO	PA	B	245	72514	LUZE
	HUGHES	ST	90	361	SWOYERSVILLE BORO	PA	B	245	72514	LUZE
	JAMES	ST	1	349	KINGSTON BORO	PA	B	245	72514	LUZE
	JAMES	ST	71	103	KINGSTON TWP	PA	B	245	72514	LUZE
	KELLER	RD	1	109	FAIRMOUNT TWP	PA	B	245	72514	LUZE
	KELLER	RD	1	69	ROSS TWP	PA	B	245	72514	LUZE
	LACKAWANNA	AVE	100	130	DUPONT BORO	PA	B	245	72514	LUZE
	LACKAWANNA	AVE	200	237	DUPONT BORO	PA	B	245	72514	LUZE
	LACKAWANNA	AVE	200	229	DURYEA BORO	PA	B	245	72514	LUZE
	LACKAWANNA	AVE	1	155	DURYEA BORO	PA	B	245	72514	LUZE
	LAFLIN	RD	1	299	JENKINS TWP	PA	B	245	72514	LUZE
	LAFLIN	RD	21	151	LAFLIN BORO	PA	B	245	72514	LUZE
	LAUREL	ST	1	59	PLAINS TWP	PA	B	245	72514	LUZE
	LAUREL	ST	1	99	WILKES BARRE CITY	PA	B	245	72514	LUZE
	LAURELHURST	RD	1	99	BEAR CREEK TWP	PA	B	245	72514	LUZE
	LAURELHURST	RD	1	41	LAUREL RUN BORO	PA	B	245	72514	LUZE
	LEHIGH	ST	1	709	WILKES BARRE CITY	PA	O	245	72514	LUZE
	LEHIGH	ST	2	708	WILKES BARRE CITY	PA	E	245	72514	LUZE

	Street	Type	Low	High	Municipality	State	Dir	Code	ZIP	County
	LEHIGH	ST	500	539	WILKES BARRE TWP	PA B	245	72514		LUZE
	LEONARD	ST	19	76	HUGHESTOWN BORO	PA B	245	72514		LUZE
	LEONARD	ST	1	79	PITTSTON CITY	PA B	245	72514		LUZE
	MAIN	ST	10	499	CONYNGHAM BORO	PA B	245	72514		LUZE
S	MAIN	ST	400	439	CONYNGHAM TWP	PA B	245	72514		LUZE
	MAIN	ST	1	209	CONYNGHAM TWP	PA B	245	72514		LUZE

Roads with same ranges in municipalities that border each other - which would cause a person to use a different municipality (In Plains, but say Wilkes-Barre)
Roads with <u>same name</u> Streets that have same ranges, but in different municipalities (Can still cause problems)

	Street	Type	Low	High	Municipality	State	Dir	Code	ZIP	County
	ARCH	ST	1	69	NEWPORT TWP	PA B	245	72514		LUZE
	ARCH	ST	1	60	NANTICOKE CITY	PA B	245	72514		LUZE
	ARMSTRONG	RD	100	220	JENKINS TWP	PA E	245	72514		LUZE
	ARMSTRONG	RD	101	221	JENKINS TWP	PA O	245	72514		LUZE
	ARMSTRONG	RD	100	136	PITTSTON TWP	PA B	245	72514		LUZE
	BAKER	RD	1002	3100	JENKINS TWP	PA B	245	72514		LUZE
	BAKER	RD	200	2005	PITTSTON TWP	PA B	245	72514		LUZE
	BALD MOUNTAIN	RD	120	3098	BEAR CREEK TWP	PA B	245	72514		LUZE
	BALD MOUNTAIN	RD	90	117	PLAINS TWP	PA B	245	72514		LUZE
	BALD MOUNTAIN	RD	119	129	PLAINS TWP	PA O	245	72514		LUZE
	BALD MOUNTAIN	RD	1153	1579	PLAINS TWP	PA O	245	72514		LUZE
	BALD MOUNTAIN	RD	2465	2465	PLAINS TWP	PA B	245	72514		LUZE
	BANK	ST	1	49	PLAINS TWP	PA B	245	72514		LUZE
	BANK	ST	1	59	WILKES BARRE CITY	PA B	245	72514		LUZE
	BANKS	AVE	1	99	CONYNGHAM BORO	PA B	245	72514		LUZE
	BANKS	AVE	1	24	SUGARLOAF TWP	PA B	245	72514		LUZE
	BENNETT	ST	300	321	AVOCA BORO	PA B	245	72514		LUZE
	BENNETT	ST	400	417	AVOCA BORO	PA B	245	72514		LUZE
	BENNETT	ST	280	327	DURYEA BORO	PA B	245	72514		LUZE
	BLACKMAN	ST	1	508	WILKES BARRE CITY	PA B	245	72514		LUZE
	BLACKMAN	ST	505	639	WILKES BARRE TWP	PA B	245	72514		LUZE
	BOHAC	ST	11	75	SWOYERSVILLE BORO	PA B	245	72514		LUZE
	BOHAC	ST	57	75	WEST WYOMING BORO	PA B	245	72514		LUZE
	BOOTH	RD	1	279	FAIRMOUNT TWP	PA B	245	72514		LUZE
	BOOTH	RD	1	259	ROSS TWP	PA B	245	72514		LUZE
	BUTLER	ST	1	150	FORTY FORT BORO	PA B	245	72514		LUZE
	BUTLER	ST	1	339	KINGSTON BORO	PA B	245	72514		LUZE
E	BUTLER	ST	1	49	SHICKSHINNY BORO	PA B	245	72514		LUZE

W	BUTLER	ST	1	107	SHICKSHINNY BORO	PA B 245 72514	LUZE	Using 2 directionals and a "plain"
	BUTLER	ST	50	59	SHICKSHINNY BORO	PA B 245 72514	LUZE	
	CAROL	ST	1	18	HARVEYS LAKE BORO	PA B 245 72514	LUZE	
	CAROL	ST	1	59	LEHMAN TWP	PA B 245 72514	LUZE	
	CEDAR	ST	1	48	HARVEYS LAKE BORO	PA B 245 72514	LUZE	
	CEDAR	ST	1	29	LEHMAN TWP	PA B 245 72514	LUZE	
	CEMETERY	ST	100	138	AVOCA BORO	PA E 245 72514	LUZE	
	CEMETERY	ST	101	139	DURYEA BORO	PA O 245 72514	LUZE	Hughestown overlaps between 111 and 139
	CEMETERY	ST	1	70	HUGHESTOWN BORO	PA B 245 72514	LUZE	
	CEMETERY	ST	111	147	HUGHESTOWN BORO	PA B 245 72514	LUZE	
	CHARLES	ST	1	59	COURTDALE BORO	PA B 245 72514	LUZE	
	CHARLES	ST	20	109	LARKSVILLE BORO	PA B 245 72514	LUZE	
	CHARLES	ST	70	219	WILKES BARRE CITY	PA B 245 72514	LUZE	
	CHARLES	ST	130	139	WILKES BARRE TWP	PA B 245 72514	LUZE	
	CHESTNUT	LN	1	99	HOLLENBACK TWP	PA B 245 72514	LUZE	
	CHESTNUT	LN	1	29	SUGARLOAF TWP	PA B 245 72514	LUZE	
	CHESTNUT	ST	701	746	AVOCA BORO	PA B 245 72514	LUZE	
	CHESTNUT	ST	800	845	AVOCA BORO	PA B 245 72514	LUZE	
	CHESTNUT	ST	700	727	DUPONT BORO	PA B 245 72514	LUZE	
	CHESTNUT	ST	800	829	DUPONT BORO	PA B 245 72514	LUZE	
	CHESTNUT	ST	1	12	HUGHESTOWN BORO	PA B 245 72514	LUZE	
	CHESTNUT	ST	100	139	SUGAR NOTCH BORO	PA B 245 72514	LUZE	
	CHESTNUT	ST	200	225	SUGAR NOTCH BORO	PA B 245 72514	LUZE	
	CHESTNUT	ST	1	399	WARRIOR RUN BORO	PA B 245 72514	LUZE	
S	CHURCH	RD	1	1001	WRIGHT TWP	PA B 245 72514	LUZE	
S	CHURCH	RD	1340	1385	WRIGHT TWP	PA B 245 72514	LUZE	Using S and Plain
	CHURCH	RD	1	1099	WRIGHT TWP	PA B 245 72514	LUZE	
	CHURCH	ST	1	369	KINGSTON BORO	PA B 245 72514	LUZE	
	CHURCH	ST	400	499	KINGSTON BORO	PA B 245 72514	LUZE	
	CHURCH	ST	1	159	EDWARDSVILLE BORO	PA B 245 72514	LUZE	
	CHURCH	*ST*	*160*	*268*	*EDWARDSVILLE BORO*	*PA E 245 72514*	*LUZE*	*These conflict with Kingston only*
	CHURCH	*ST*	*161*	*269*	*LARKSVILLE BORO*	*PA O 245 72514*	*LUZE*	*These conflict with Kingston only*
	CIRCLE	DR	1	44	DALLAS TWP	PA B 245 72514	LUZE	
	CIRCLE	DR	1	50	KINGSTON TWP	PA B 245 72514	LUZE	
	COAL	ST	1	69	NANTICOKE CITY	PA B 245 72514	LUZE	
	COAL	ST	1	99	NEWPORT TWP	PA B 245 72514	LUZE	
	COUNTRY	RD	1	39	EXETER TWP	PA B 245 72514	LUZE	
	COUNTRY	RD	1	99	KINGSTON TWP	PA B 245 72514	LUZE	
	DAISY	LN	1	12	HARVEYS LAKE BORO	PA B 245 72514	LUZE	
	DAISY	LN	1	39	LEHMAN TWP	PA B 245 72514	LUZE	

	Name	Type	Low	High	Municipality	State	P	Code	ZIP	County	Notes
	DAVIS	ST	1	59	ASHLEY BORO	PA	B	245	72514	LUZE	
	DAVIS	ST	1	29	HANOVER TWP	PA	B	245	72514	LUZE	
W	DIVISION	ST	20	118	HANOVER TWP	PA	E	245	72514	LUZE	
W	DIVISION	ST	124	268	HANOVER TWP	PA	E	245	72514	LUZE	Uses plain for 1-19
	DIVISION	ST	1	19	HANOVER TWP	PA	O	245	72514	LUZE	
	ELIZABETH	ST	1	29	PLAINS TWP	PA	B	245	72514	LUZE	
	ELIZABETH	ST	1	109	WILKES BARRE CITY	PA	B	245	72514	LUZE	
	ELM	ST	200	275	DUPONT BORO	PA	B	245	72514	LUZE	
	ELM	ST	200	233	DURYEA BORO	PA	B	245	72514	LUZE	
	ELM	ST	10	19	LARKSVILLE BORO	PA	B	245	72514	LUZE	
	ELM	ST	1	79	PLYMOUTH BORO	PA	B	245	72514	LUZE	
	FILBERT	ST	1	76	FORTY FORT BORO	PA	B	245	72514	LUZE	
	FILBERT	ST	12	85	SWOYERSVILLE BORO	PA	B	245	72514	LUZE	
	FIREHOUSE	RD	1	14	DALLAS TWP	PA	B	245	72514	LUZE	
	FIREHOUSE	RD	1	19	HARVEYS LAKE BORO	PA	B	245	72514	LUZE	
	FIREHOUSE	RD	1	199	LEHMAN TWP	PA	B	245	72514	LUZE	
	FOREST	DR	1	138	SLOCUM TWP	PA	B	245	72514	LUZE	
	FOREST	DR	1	59	WRIGHT TWP	PA	B	245	72514	LUZE	
	FRONT	ST	401	439	HANOVER TWP	PA	O	245	72514	LUZE	
	FRONT	ST	501	519	HANOVER TWP	PA	O	245	72514	LUZE	
	FRONT	ST	550	578	HANOVER TWP	PA	E	245	72514	LUZE	
	FRONT	ST	400	549	WARRIOR RUN BORO	PA	B	245	72514	LUZE	
	FRONT	ST	551	579	WARRIOR RUN BORO	PA	O	245	72514	LUZE	
E	FROTHINGHAM	ST	1	100	PITTSTON CITY	PA	B	245	72514	LUZE	
	FROTHINGHAM	ST	1	99	PITTSTON TWP	PA	B	245	72514	LUZE	
	GRANDVIEW	AVE	1	100	DALLAS TWP	PA	B	245	72514	LUZE	
	GRANDVIEW	AVE	1	99	KINGSTON TWP	PA	B	245	72514	LUZE	
W	GREEN	ST	600	649	HAZLE TWP	PA	B	245	72514	LUZE	
W	GREEN	ST	500	649	HAZLETON CITY	PA	B	245	72514	LUZE	
	GROVE	ST	400	427	AVOCA BORO	PA	B	245	72514	LUZE	
	GROVE	ST	500	543	AVOCA BORO	PA	B	245	72514	LUZE	
	GROVE	ST	400	543	DURYEA BORO	PA	B	245	72514	LUZE	
	HANCOCK	ST	1	99	PLAINS TWP	PA	B	245	72514	LUZE	
N	HANCOCK	ST	1	89	WILKES BARRE CITY	PA	B	245	72514	LUZE	
S	HANCOCK	ST	1	17	WILKES BARRE CITY	PA	O	245	72514	LUZE	
S	HANCOCK	ST	2	18	WILKES BARRE CITY	PA	E	245	72514	LUZE	
	HANOVER	ST	190	299	HANOVER TWP	PA	B	245	72514	LUZE	
	HANOVER	*ST*	*100*	*199*	*SUGAR NOTCH BORO*	*PA*	*B*	*245*	*72514*	*LUZE*	*These conflict with the hanover range*
	HANOVER	*ST*	*200*	*399*	*WARRIOR RUN BORO*	*PA*	*B*	*245*	*72514*	*LUZE*	*These conflict with the hanover range*

	Street	Type	From	To	Municipality	State				County
	HANOVER	ST	1	299	WILKES BARRE CITY	PA	B	245	72514	LUZE
	HARRIET	ST	1	59	PLAINS TWP	PA	B	245	72514	LUZE
	HARRIET	ST	1	39	WILKES BARRE CITY	PA	B	245	72514	LUZE
E	HEMLOCK	ST	1	54	HAZLETON CITY	PA	B	245	72514	LUZE
E	HEMLOCK	ST	100	155	HAZLETON CITY	PA	B	245	72514	LUZE
	HEMLOCK	ST	1	44	WEST HAZLETON BORO	PA	B	245	72514	LUZE
	HEMLOCK	ST	100	136	WEST HAZLETON BORO	PA	B	245	72514	LUZE
	HENRY	ST	1	159	PLAINS TWP	PA	B	245	72514	LUZE
	HENRY	ST	1	59	WILKES BARRE CITY	PA	B	245	72514	LUZE
	HILL	ST	1	109	NANTICOKE CITY	PA	B	245	72514	LUZE
	HILL	ST	1	19	NEWPORT TWP	PA	B	245	72514	LUZE
	HOBBIE	RD	1	369	BUTLER TWP	PA	B	245	72514	LUZE
	HOBBIE	RD	290	999	HOLLENBACK TWP	PA	B	245	72514	LUZE
	HOBBIE	RD	1	289	NESCOPECK TWP	PA	B	245	72514	LUZE
N	HOLLENBACK	RD	744	900	DENNISON TWP	PA	B	245	72514	LUZE
	HOLLENBACK	RD	1	34	DENNISON TWP	PA	B	245	72514	LUZE
N	HOLLENBACK	RD	360	743	PENN LAKE PARK BORO	PA	B	245	72514	LUZE
	HOLLENBACK	RD	35	150	PENN LAKE PARK BORO	PA	B	245	72514	LUZE
	HOLLENBACK	RD	167	359	PENN LAKE PARK BORO	PA	B	245	72514	LUZE
	IDE	RD	1	99	LAKE TWP	PA	B	245	72514	LUZE
	IDE	RD	1	139	LEHMAN TWP	PA	B	245	72514	LUZE
	JONES	RD	1	8	HARVEYS LAKE BORO	PA	B	245	72514	LUZE
	JONES	RD	1	119	LEHMAN TWP	PA	B	245	72514	LUZE
	JONES	ST	1	79	PLAINS TWP	PA	B	245	72514	LUZE
	JONES	ST	1	249	WILKES BARRE CITY	PA	B	245	72514	LUZE
	LAKE	DR	1	49	BEAR CREEK TWP	PA	B	245	72514	LUZE
E	LAKE	RD	1	777	BEAR CREEK VILLAGE BORO	PA	B	245	72514	LUZE
W	LAKE	RD	1	1009	BEAR CREEK VILLAGE BORO	PA	B	245	72514	LUZE
N	LAKESIDE	DR	2	44	DALLAS BORO	PA	E	245	72514	LUZE
N	LAKESIDE	DR	1	45	DALLAS TWP	PA	O	245	72514	LUZE
	LAKESIDE	DR	1	268	HARVEYS LAKE BORO	PA	B	245	72514	LUZE
	LAKESIDE	DR	1	429	LEHMAN TWP	PA	B	245	72514	LUZE
	LINCOLN	ST	300	311	DUPONT BORO	PA	B	245	72514	LUZE
	LINCOLN	ST	300	331	DURYEA BORO	PA	B	245	72514	LUZE
	LINCOLN	ST	1	99	PITTSTON TWP	PA	B	245	72514	LUZE
	LINCOLN	ST	1	19	YATESVILLE BORO	PA	B	245	72514	LUZE
	LINE	ST	1	169	NANTICOKE CITY	PA	B	245	72514	LUZE
	LINE	ST	1	39	NEWPORT TWP	PA	B	245	72514	LUZE

	Street	Type	Low	High	Municipality	State				ZIP		Notes
	MAFFETT	ST	1	349	PLAINS TWP	PA	B	245	72514		LUZE	
	MAFFETT	ST	1	119	WILKES BARRE CITY	PA	B	245	72514		LUZE	
	MAIN	RD	1	3932	HUNLOCK TWP	PA	B	245	72514		LUZE	
	MAIN	RD	1	499	UNION TWP	PA	B	245	72514		LUZE	
	MAIN	ST	400	429	DUPONT BORO	PA	B	245	72514		LUZE	
	MAIN	ST	500	529	DUPONT BORO	PA	B	245	72514		LUZE	
	MAIN	ST	600	623	DUPONT BORO	PA	B	245	72514		LUZE	
	MAIN	ST	400	423	DURYEA BORO	PA	B	245	72514		LUZE	
	MAIN	ST	500	521	DURYEA BORO	PA	B	245	72514		LUZE	
	MAIN	ST	600	635	DURYEA BORO	PA	B	245	72514		LUZE	
	MAIN	ST	1	219	KINGSTON BORO	PA	B	245	72514		LUZE	
N	MAIN	ST	1	213	KINGSTON TWP	PA	B	245	72514		LUZE	
S	MAIN	ST	1	111	KINGSTON TWP	PA	B	245	72514		LUZE	
	MAIN	ST	1	209	LAFLIN BORO	PA	B	245	72514		LUZE	
	MAIN	ST	1	201	JENKINS TWP	PA	B	245	72514		LUZE	
	MAIN	ST	1	219	KINGSTON BORO	PA	B	245	72514		LUZE	
	MAIN	ST	11	445	LUZERNE BORO	PA	B	245	72514		LUZE	
E	MAIN	ST	1	289	NANTICOKE CITY	PA	B	245	72514		LUZE	
W	MAIN	ST	1	149	NANTICOKE CITY	PA	B	245	72514		LUZE	
E	MAIN	ST	1	319	NEWPORT TWP	PA	B	245	72514		LUZE	
W	MAIN	ST	1	397	NEWPORT TWP	PA	B	245	72514		LUZE	
N	MAIN	ST	1	768	PITTSTON CITY	PA	B	245	72514		LUZE	
S	MAIN	ST	1	378	PITTSTON CITY	PA	B	245	72514		LUZE	
	MAIN	ST	625	647	PITTSTON TWP	PA	O	245	72514		LUZE	
	MAIN	ST	653	659	PITTSTON TWP	PA	O	245	72514		LUZE	
N	MAIN	ST	1	59	PLAINS TWP	PA	B	245	72514		LUZE	
N	MAIN	ST	1	186	WILKES BARRE CITY	PA	B	245	72514		LUZE	Also an E main in WB & Plains
S	MAIN	ST	1	287	PLAINS TWP	PA	B	245	72514		LUZE	
S	MAIN	ST	1	349	WILKES BARRE CITY	PA	B	245	72514		LUZE	Also an E main in WB & Plains
W	MAIN	ST	1	669	PLYMOUTH BORO	PA	B	245	72514		LUZE	
W	MAIN	ST	100	101	PLYMOUTH TWP	PA	B	245	72514		LUZE	
	MAIN	ST	11	445	LUZERNE BORO	PA	B	245	72514		LUZE	
	MAIN	ST	303	310	SWOYERSVILLE BORO	PA	B	245	72514		LUZE	
	MAIN	ST	314	777	SWOYERSVILLE BORO	PA	B	245	72514		LUZE	
	MANOR	DR	1	15	DALLAS TWP	PA	B	245	72514		LUZE	
	MANOR	DR	1	270	KINGSTON TWP	PA	B	245	72514		LUZE	
	MAPLE	ST	1	69	PLAINS TWP	PA	B	245	72514		LUZE	
W	MAPLE	ST	1	79	WILKES BARRE CITY	PA	B	245	72514		LUZE	
	MARKET	ST	1	183	JENKINS TWP	PA	B	245	72514		LUZE	
	MARKET	ST	1	99	LAFLIN BORO	PA	B	245	72514		LUZE	

MARY	ST	1	99	ASHLEY BORO	PA B 245 72514	LUZE	
MARY	ST	1	9	HANOVER TWP	PA B 245 72514	LUZE	
MAXWELL	ST	1	39	ASHLEY BORO	PA B 245 72514	LUZE	
MAXWELL	ST	1	99	WILKES BARRE CITY	PA B 245 72514	LUZE	
MAY	ST	1	8	JENKINS TWP	PA B 245 72514	LUZE	
MAY	ST	1	29	PLAINS TWP	PA B 245 72514	LUZE	
MCDONALD	ST	1	44	LARKSVILLE BORO	PA B 245 72514	LUZE	
MCDONALD	ST	1	149	PLYMOUTH TWP	PA B 245 72514	LUZE	

Anomalies and other issues:

COUNTRY CLUB	RD	1	772	DALLAS TWP	PA B 245 72514	LUZE	
COUNTRY CLUB	RD	773	950	DALLAS TWP	PA B 245 72514	LUZE	Rd and APTS constantly confused on Phone co side
COUNTRY CLUB APTS		1	949	DALLAS TWP	PA B 245 72514	LUZE	
FARRELL	LN	1	29	PLAINS TWP	PA B 245 72514	LUZE	
FARRELL	ST	1	309	PLAINS TWP	PA B 245 72514	LUZE	
GAYLORD	AVE	1	179	PLYMOUTH BORO	PA B 245 72514	LUZE	
GAYLORD	DR	100	119	PLYMOUTH BORO	PA B 245 72514	LUZE	
GEORGE	DR	1	16	HUGHESTOWN BORO	PA B 245 72514	LUZE	
GEORGE	ST	1	45	PITTSTON CITY	PA B 245 72514	LUZE	
GOLF COURSE	RD	1	319	HUNLOCK TWP	PA B 245 72514	LUZE	
GOLF COURSE	RD	1	99	LEHMAN TWP	PA B 245 72514	LUZE	
KIDDER	ST	701	755	WILKES BARRE TWP	PA O 245 72514	LUZE	
KIDDER	ST	1050	1098	WILKES BARRE TWP	PA B 245 72514	LUZE	There are 2 Kidder St's not near each other, but have different numbers

E	KIRMAR	AVE	1	129	NEWPORT TWP	PA B 245 72514	LUZE	
W	KIRMAR	AVE	1	555	NEWPORT TWP	PA B 245 72514	LUZE	
W	KIRMAR	PKWY	1	29	NEWPORT TWP	PA B 245 72514	LUZE	
	KIRMAR	TER	1	9	NEWPORT TWP	PA B 245 72514	LUZE	
N	LAKEWOOD	DR	1	199	JENKINS TWP	PA B 245 72514	LUZE	
S	LAKEWOOD	DR	101	126	JENKINS TWP	PA B 245 72514	LUZE	
	LAKEWOOD	DR	1	117	JENKINS TWP	PA B 245 72514	LUZE	
	LATHROP	CT	130	169	KINGSTON BORO	PA B 245 72514	LUZE	
	LATHROP	ST	74	400	KINGSTON BORO	PA B 245 72514	LUZE	
	LAUREL	HL	6	13	HAZLETON CITY	PA B 245 72514	LUZE	doubles as Club 40 Rd
	LAURELBROOK	DR	101	191	BEAR CREEK TWP	PA O 245 72514	LUZE	
	LAURELBROOK	EST	1	702	BEAR CREEK TWP	PA B 245 72514	LUZE	
	LAURELBROOK	EST	704	704	BEAR CREEK TWP	PA E 245 72514	LUZE	

	LEWIS	DR	1	480	BEAR CREEK VILLAGE BORO	PA	B	245	72514	LUZE
	LEWIS	LN	1	49	BEAR CREEK VILLAGE BORO	PA	B	245	72514	LUZE
	LEWIS CULDESAC	DR	1	99	BEAR CREEK VILLAGE BORO	PA	B	245	72514	LUZE
E	MAIN	AVE	1000	1050	NEWPORT TWP	PA	B	245	72514	LUZE
W	MAIN	AVE	1000	1189	NEWPORT TWP	PA	B	245	72514	LUZE
	MAIN	RD	1	79	NEWPORT TWP	PA	B	245	72514	LUZE
E	MAIN	ST	1	319	NEWPORT TWP	PA	B	245	72514	LUZE
W	MAIN	ST	1	397	NEWPORT TWP	PA	B	245	72514	LUZE
N	MAIN	ST	1	300	SUGARLOAF TWP	PA	B	245	72514	LUZE
S	MAIN	ST	1	85	SUGARLOAF TWP	PA	B	245	72514	LUZE
	MAIN	ST	2	8	SUGARLOAF TWP	PA	E	245	72514	LUZE
N	MARKET	ST	1	99	NANTICOKE CITY	PA	B	245	72514	LUZE
S	MARKET	ST	1	249	NANTICOKE CITY	PA	B	245	72514	LUZE
N	MARKET	ST	1	69	NEWPORT TWP	PA	B	245	72514	LUZE
S	MARKET	ST	1	39	NEWPORT TWP	PA	B	245	72514	LUZE
	MASON	ST	1	200	EXETER BORO	PA	B	245	72514	LUZE
	MASON	CT	1	142	EXETER BORO	PA	B	245	72514	LUZE
	MEADOW	DR	80	196	DALLAS TWP	PA	B	245	72514	LUZE
	MEADOWS	LN	639	648	DALLAS TWP	PA	B	245	72514	LUZE
	MEADOWVIEW	DR	1	62	DALLAS TWP	PA	B	245	72514	LUZE
	MEYERS	LN	1	69	EDWARDSVILLE BORO	PA	B	245	72514	LUZE
	MEYERS	ST	20	299	EDWARDSVILLE BORO	PA	B	245	72514	LUZE
	MEYERS	LN	70	419	KINGSTON BORO	PA	B	245	72514	LUZE
	MYERS	CT	1	19	KINGSTON BORO	PA	B	245	72514	LUZE
	MYERS	ST	15	120	FORTY FORT BORO	PA	B	245	72514	LUZE

VA Hospital - uses 1111 East End Blvd, but the BLVD doesn't go by the structure anymore; also check MSAG, 1111 should be in Plains
Bryden St - recheck for converging ranges
Exeter Twp Wyoming Co vs our county - numbers converge on each other.
commerce Rd - check the 10 range for overlap
Davenport St Dallas Boro and Twp - overlap
Demunds rd - check overlap
Glendale Rd Pitt Twp - needs readdressing

Signage - Take a ride down Pennsylvania AVE in Wilkes Barre City and you'll see every sign says "BLVD"

THESE LOUIE IS LOOKING IN TO TO SEE IF THERE ARE ERRORS IN MSAG

	DESSEN	DR	2	22	HAZLE TWP	PA	B	245	72514	LUZE	
	DESSEN	DR	24	178	HAZLE TWP	PA	E	245	72514	LUZE	
	DESSEN	DR	1	179	WEST HAZLETON BORO	PA	O	245	72514	LUZE	check overlap
	DESSEN	DR	180	350	WEST HAZLETON BORO	PA	B	245	72514	LUZE	

	Name	Type	Low	High	Municipality	State			Zip	County	Note
	ENGLEWOOD	TER	1	1932	FORTY FORT BORO	PA	B	245	72514	LUZE	
	ENGLEWOOD	TER	1929	1950	WYOMING BORO	PA	B	245	72514	LUZE	
	FAIRFIELD	DR	1	8	JENKINS TWP	PA	B	245	72514	LUZE	
	FAIRFIELD	DR	3	39	LAFLIN BORO	PA	B	245	72514	LUZE	check overlap
	FAIRLAWN	DR	1	19	HUGHESTOWN BORO	PA	B	245	72514	LUZE	
	FAIRLAWN	DR	19	28	PITTSTON TWP	PA	B	245	72514	LUZE	check overlap
	FORDHAM	RD	33	33	JENKINS TWP	PA	B	245	72514	LUZE	
	FORDHAM	RD	37	37	JENKINS TWP	PA	B	245	72514	LUZE	
	FORDHAM	RD	1	34	LAFLIN BORO	PA	B	245	72514	LUZE	check overlap
	FORDHAM	RD	36	59	YATESVILLE BORO	PA	B	245	72514	LUZE	
	GEDDING	ST	200	284	AVOCA BORO	PA	B	245	72514	LUZE	
	GEDDING	ST	281	301	DUPONT BORO	PA	B	245	72514	LUZE	check overlap
	GOULD	ST	226	249	LARKSVILLE BORO	PA	B	245	72514	LUZE	
	GOULD	ST	190	233	PLYMOUTH BORO	PA	B	245	72514	LUZE	
	GRANDVIEW	DR	1	25	HUGHESTOWN BORO	PA	B	245	72514	LUZE	
	GRANDVIEW	DR	115	158	PITTSTON CITY	PA	B	245	72514	LUZE	
	GRANDVIEW	DR	24	113	PITTSTON TWP	PA	B	245	72514	LUZE	
	HEMLOCK	ST	600	693	FOSTER TWP	PA	B	245	72514	LUZE	
	HEMLOCK	ST	693	697	FREELAND BORO	PA	O	245	72514	LUZE	check 693
	HILLSIDE		129	137	KINGSTON TWP	PA	O	245	72514	LUZE	
	HOBBIE WAPWALLOPEN	RD	330	399	DORRANCE TWP	PA	B	245	72514	LUZE	
	HOBBIE WAPWALLOPEN	RD	348	348	HOLLENBACK TWP	PA	E	245	72514	LUZE	
	HUSTON	ST	1	39	WILKES BARRE CITY	PA	B	245	72514	LUZE	
	HUTSON	ST	1	99	WILKES BARRE CITY	PA	B	245	72514	LUZE	
	I 80	HWY	260	260	BUTLER TWP	PA	E	245	72514	LUZE	
	I81		176	177	DUPONT BORO	PA	B	245	72514	LUZE	
N	JAMES	ST	1021	1099	HAZLE TWP	PA	B	245	72514	LUZE	
N	JAMES	ST	500	1024	HAZLETON CITY	PA	B	245	72514	LUZE	
	LAKE	ST	1	182	DALLAS BORO	PA	B	245	72514	LUZE	
	LAKE	ST	181	538	DALLAS TWP	PA	B	245	72514	LUZE	
	LAURIE	LN	107	149	HUGHESTOWN BORO	PA	B	245	72514	LUZE	
	LAURIE	LN	99	108	PITTSTON CITY	PA	B	245	72514	LUZE	
E	LUZERNE	AVE	44	150	EDWARDSVILLE BORO	PA	E	245	72514	LUZE	
E	LUZERNE	AVE	143	229	LARKSVILLE BORO	PA	B	245	72514	LUZE	
N	MAIN	ST	213	235	DALLAS TWP	PA	B	245	72514	LUZE	
	MAPLE	LN	111	122	HUGHESTOWN BORO	PA	B	245	72514	LUZE	
	MAPLE	LN	85	111	PITTSTON CITY	PA	B	245	72514	LUZE	

County of Luzerne
Commonwealth of Pennsylvania

ORDINANCE

NO. 1 JUNE-2009

E911 PROPERTY ADDRESSING

AN ORDINANCE OF THE BOARD OF COUNTY COMMISSIONERS OF THE COUNTY OF LUZERNE, TO PROVIDE STANDARDS FOR THE NAMING OF STREETS; FABRICATION, ERECTION AND MAINTENANCE OF STREET NAME SIGNS AND ESTABLISHING A STREET ADDRESS NUMBERING SYSTEM FOR THE COUNTY OF LUZERNE, COMMONWEALTH OF PENNSYLVANIA.

WHEREAS, the County of Luzerne, Commonwealth of Pennsylvania is a third class county; and

WHEREAS, it is the desire of the Luzerne County Commissioners to create the Luzerne County Enhanced 9-1-1 System for improved delivery of Police, Fire and EMS that benefits the health, safety and welfare of all residents of this County; and

WHEREAS, the Board of County Commissioners may act under the public safety provisions of the County Code to provide for and require property addressing with the necessary signs, and

WHEREAS, the Board of Commissioners recognize the legal right of boroughs, townships and the Cities to name all municipal roadways within their boundaries, and

WHEREAS, the Board of County Commissioners want to work cooperatively with the municipalities to achieve a coordinated county-wide addressing system with road identification to improve public safety, and

WHEREAS, a standardized system of property address numbering and replacement of street name signs for public and private roadways better enables emergency response personnel to locate persons requiring assistance and makes the Enhanced 9-1-1 system more effective; and

WHEREAS, the Commissioners wish to conduct the development and orderly implementation of a standardized, county-wide system of property address numbering in cooperation with the U.S. Postal Service and NENA (National Emergency Number Association) for use throughout Luzerne County, and

WHEREAS, the County intends to perform the assignment of addresses at no expense to the participating municipalities, and

WHEREAS, if an existing 100 block addressing exists and already meets standards of NENA, that the existing system will not be changed.

NOW, THEREFORE, BE IT ENACTED AND ORDAINED by the County Commissioners of the County of Luzerne, Pennsylvania, as follows:

LUZERNE COUNTY 911 STANDARDIZED ADDRESSING ORDINANCE

AN ORDINANCE TO PROVIDE STANDARDS FOR THE NAMING OF STREETS; FABRICATION, ERECTION AND MAINTENANCE OF STREET NAME SIGNS AND ESTABLISHING A STREET ADDRESS NUMBERING SYSTEM FOR THE COUNTY OF LUZERNE, COMMONWEALTH OF PENNSYLVANIA

BE IT AND IT IS HEREBY ORDAINED by the BOARD OF COMMISSIONERS OF LUZERNE COUNTY, PENNSYLVANIA, that the following ordinance is adopted to provide for an orderly method of naming and numbering public and private streets and roadways within LUZERNE County.

PURPOSE

The purpose of this ordinance is to better enhance the LUZERNE County E911 System and to provide for a uniform county-wide addressing system with respect to naming of streets and roadways; fabrication, erection and maintenance of street name signs; and assigning street or house numbers to all residences, including gated communities, principal buildings and businesses to assist fire, rescue, ambulance companies, law enforcement agencies, the Postal Service, and the public in the timely and efficient provision of services to residents and businesses of LUZERNE County.

ADMINISTRATION

The LUZERNE County Department of Public Safety/GIS 9-1-1 Data Department in conjunction with Luzerne County Planning Commission is hereby designated as the agent of the Board of Commissioners of LUZERNE County, responsible for the administration, implementation and enforcement of this ordinance.

The agent shall establish street names as chosen by the Municipality, or land developer or landowner and street or house numbers in accordance with the guidelines established herein.

During the conduct of addressing operations within the County, The Luzerne County Public Safety Department and Luzerne County Planning Commission or their agents or contractors as may be duly appointed by them, shall be authorized to enter upon, travel, measure, photograph and inspect all roadways and private driveways, including gated communities, and to visit all structures within Luzerne County for the purpose of determining, assigning, and notifying the inhabitants thereof of such assigned addresses.

The agencies and agents responsible are hereby directed to limit their visit to private properties to exterior views and are prohibited from entering into private residences or structures, except at the request of the property owner or resident or by advance appointment.

GUIDELINES FOR THE NAMING OF STREETS

Street Naming - A Street or roadway shall be named if the street or roadway is found by the agent to meet one or more of the following conditions:

1. If the roadway is greater than one thousand feet (1,000') in length from the intersection of another roadway to a termination point.

2. If two or more habitable structures or business-related buildings or otherwise habitable structures are found or proposed to be constructed along same roadway.

Choice of Names - Street or roadway names should be in pleasant sounding, appropriate, and easy to read and pronounce. The use of similar sounding names shall be avoided. Historical names of roadways should be retained where possible. All street names should tend to promote the heritage, history and traditions of the County and reflect its geography and character.

Duplication of Street Names - Duplication of street names, regardless of the particular suffix, shall be prohibited within a municipality or postal zip code area. Duplication of street names, regardless of the particular suffix, shall be avoided within an emergency service area. The term duplication shall include "sound - a - like" names, such as Beech Street and Beach Street. The agent shall keep an updated list of street names in the County, including incorporated boroughs in the County, so that new street names will not duplicate existing names.

Continuous Roads - continuous roads shall bear the same name throughout the County where practical. Street and roadway name changes shall occur at street intersections and/or municipal boundary lines only.

Generic Classes of Roads For Street Name Suffixes - The following generic street suffixes and abbreviations are noted for providing a guide for name designation. Street designator abbreviations as listed below shall conform to standards and guidelines established by the U. S. Postal Service to facilitate standardization of addressing.

Other suffixes not listed above may be considered or variations from the above may be allowed at the discretion of the agent, providing they meet the USPS Guidelines, Luzerne County 9-1-1 guidelines and other requirements.

ESTABLISHMENT OF STREET ADDRESS (HOUSE) NUMBERS

The agent shall establish street address numbers in accordance with the guidelines established herein.

Assignment of Street Address (House) Numbers - All street addresses shall be assigned by the agent. New addresses shall be assigned by the agent before final subdivision plan approval is granted. The agent shall then notify the property owner, developer or sub-divider of the address as assigned. No residential, commercial or industrial subdivision or land development shall be recorded unless it has been assigned street numbers and a street name approved by the agent.

Numbering - The agent shall undertake a systematic numbering program for streets within the county in accordance with the following determinations.

Numbering Convention - The agent shall, for the purpose of assigning address numbers (house numbers), use the basic house numbering system known as the equal interval addressing system, also known as the uniform measurement system, century system, or benchmark system. This convention is based upon creating an address from road distance or road frontage. An address is derived by measuring the distance along a road and dividing that distance by some equal interval to determine the address for a structure. In an equal interval system, the interval unit shall be small enough to provide an address to each building even in the most congested or areas.

Odd and Even Numbering Convention - A convention of odd and even numbering shall be adopted and adhered to by the agent. A consistent pattern of odd and even numbering shall be established by the agent for addressing new streets. This shall be that odd numbers shall be applied to one side of the street and even numbers to the opposite side of the street. Existing street numbering in an adjacent area should dictate which side the numbering is applied to.

Point of Origin - A point of origin for street numbering shall be established by the agent for dead end type streets, considering the possible future development or future lengthening of a street. These streets shall have the street numbers commence at the intersection with another street and progress toward the dead end.

City Block Numbering - In cases where city block numbering systems exist, and such street system is developed and expanded, the new house numbering system shall replicate said block numbering system as close and as efficiently as possible.

Notification - The affected property owner or current occupant shall be notified in writing of any address change. The property owner and/or occupant shall be responsible for notifying the utility companies and other interested parties of any address change or new address. If a property owner or occupant fails to receive,

misplaces or for any other reason is unaware of the address number, the property owner or occupant shall contact the LUZERNE County Data and Mapping Department to obtain the correct address.

Displaying Numbers - Within ninety (90) days after the enactment of this ordinance, or within sixty (60) days after the receipt of written notification of change of address, the owner or occupant shall affix/display the assigned number as prescribed herein. Street address numbers shall be of a contrasting color to the background on which they are mounted and may be made of a reflective material so as to make them more visible.

New Numbers - it shall be the duty of such owner or occupant, upon affixing the new number, to remove any conflicting number. The cost of displaying the new number shall be the responsibility of the property owner. Numbers assigned to newly constructed buildings shall be displayed in accordance with the provisions of this ordinance.

Maintenance of Numbers - it shall be the responsibility of the owner to maintain the street address display in good condition.

SIZE AND LOCATION OF STREET ADDRESS NUMBERS

Residences

1. Each residence shall prominently display its numbered address.
2. Street address numbers for residences shall not be less than three (3) inches in height and shall be made of a durable and clearly visible material.
3. The numbers shall be conspicuously placed on, above, or at the side of the main entrance so that the number is distinguishable and legible from the street. Where the entrance of a residence is more that fifty (50) feet from the street, or when the residence is not clearly visible from the street, the number shall be placed along a walk, driveway, or another suitable location as near as conveniently possible to the street so that the number is distinguishable and legible from the street by day or night.

In either case described above, a second set of numbers must be placed on a mailbox or other suitable post, or mounted at the edge of the intersection of the driveway and street so that it is clearly visible.

Commercial and Industrial Structure

1. All commercial and industrial structures shall display street address numbers of not less than four (4) inches in height.
2. When possible, the number shall be displayed over the main entrance to the structure.
3. There shall be no other wording or numbers within two (2) feet of the building number.

Apartments, Townhouses, Shopping Centers

1. Apartments, townhouses, shopping centers or other similar groupings where only one number is assigned shall display such number at the main entranceway.
2. Said address numbers shall have a minimum height of four (4) inches.
3. Numbers for individual units or establishments within the complex shall be displayed on, above, or to the side of the main doorway of each unit or establishment.

Street Name Signs

General - Metal street signs of standard design approved by the municipality for use on all streets shall be erected on metal or wooded poles, and posted at points designated by the agent or prescribed by current Department of Transportation codes. The cost of the signs, installation and maintenance thereof are not the responsibility of LUZERNE County.

Department of Transportation regulations - New sign placement shall follow guidelines and safety regulations as set and described in Pa Title 67, PaDot Regulations and Pa Title 75, Pa Vehicle Code. It is not the intention of this ordinance to supersede, alter, or to enforce the above mentioned codes.

Erection and Fee; Public Streets - At the request of a developer, and upon receipt of a fee sufficient to cover the cost of materials and labor, as determined by the municipality, the municipality or its designee shall fabricate, erect and thereafter maintain street name signs at the intersections of new streets. In new subdivisions, all street names must be displayed on properly erected signs prior to final subdivision plan approval. Should street name signs be erected prior to new streets being accepted into the municipal road system, the developer shall be responsible for their maintenance until such time as the streets are accepted into the municipal road system. Prior to the municipality accepting a new street for inclusion into the municipal road system, the municipality shall first determine that all street name signs are in a state of good maintenance and accurately placed. Should any street name signs be missing or in need of repair, the developer shall pay the full cost of the replacement and/or repair thereof.

Erection and Fee; Private Streets - At the request of the majority of the owners of a private streets, and upon receipt of a fee sufficient to cover the cost of materials and labor, as determined by the municipality, the municipality or its designee shall fabricate, erect and thereafter maintain street name signs at the intersection of a private and a public street.

Description of Signs - Street name signs bearing the approved names of public streets shall be installed at intersections and shall comply with specifications and requirements set forth in Title 67 of the Pennsylvania Regulations and Title 75 of Pennsylvania Vehicle Code, the state code of regulations otherwise followed by all Pennsylvania municipalities.

Direction - Street name signs shall be placed so that the name being displayed is parallel to the named street.

Unapproved Street Name Signs - The posting or use of a street name that has not been approved by the agent shall be prohibited, including ornamental signs that resemble street name signs.

ENFORCEMENT

Whenever the agent has reason to believe there has been a violation of any provision of this ordinance, the agent, or the designee of the agent, or the municipality shall give notice to the person or party failing to comply and order said person or party to take corrective action or measures within thirty (30) days from the date of notification.

If such person or party fails to comply with the duly issued order, the agent, or the designee of the agent, shall initiate necessary actions to terminate the violation through criminal and/or civil measures.

In addition to any other remedy provided in this ordinance or by law, the Luzerne County Planning Commission may institute proceedings to restrain any violation of, or to require compliance with this ordinance

Penalties - Any violation of any provision of this ordinance shall constitute a summary offense, punishable by a maximum fine not to exceed $25.00 plus court costs per offense, payable to the General Fund of Luzerne County. Any penalty ordered hereunder may be collected as debts of like amount as provided by Pennsylvania Statutes. Failure of multiple property owners to resolve responsibility for erection of the sign(s) shall constitute a violation of this ordinance by all such owners, jointly and severally. Subsequent to the thirty (30) day period following a notification of violation, each month of violation shall constitute a separate violation.

This ordinance, as amended, shall become effective thirty (30) days after enactment and the publication of this ordinance for current standard addressed municipalities. For municipalities remaining to be standard addressed, this Ordinance shall become effective upon the publication of new official addresses, for each community or area, and for the remainder of the County upon the date, that the last community or area to be standard addressed has been notified.

ORDAINED AND ENACTED as an Amended Ordinance this 17th day of July, 2009.

County of Luzerne
Commonwealth of Pennsylvania

Commissioner Maryanne C. Petrilla- Chairman

Commissioner Gregory A Skrepenak

Commissioner Stephen A. Urban

Attest: _____

Douglas Pape- County Manager/Chief Clerk

Kimball
L. Robert Kimball & Associates
Architects and Engineers

Assessment Report
of the Luzerne County 9-1-1 Center
Submitted to
Luzerne County, Pennsylvania

TABLE OF CONTENTS

L. Robert Kimball & Associates
Architects and Engineers

1. EXECUTIVE SUMMARY

In August 2006, the Luzerne County Board of Commissioners (County) contracted with L. Robert Kimball & Associates (Kimball) to conduct a comprehensive review of the Luzerne County 9-1-1 Center. The purpose of the review, as described by the County in their Request for Proposals (RFP), was to assure optimal public safety communications service by achieving efficiencies and improved effectiveness of emergency call processing and dispatch.

The assessment conducted by Kimball was done in four components: Technology; Infrastructure/Facility; Operations; and Accreditation Readiness. Kimball conducted extensive onsite observations and interviews, document reviews, and offsite interviews to collect the data required to evaluate the 9-1-1 center. Findings were compared with established industry best practices.

Although the review examines the agency in a compartmentalized manner and comments on the component parts individually, in the operational and administrative environments of the 9-1-1 center, all parts are integrated and impact each other. What affects one component will affect the others. Throughout the report, Kimball provides our impressions of the overall efficiencies, effectiveness, and quality of service, as a sum of the parts that comprise the center. Emergency responders' communications requirements are being met, and the level of service is continuously improving. Administrative tasking could be enhanced if center management personnel had additional time to devote to non-operational matters.

The administration and staff of the Luzerne County 9-1-1 Center were excellent hosts to the Kimball team. Information and cooperation were readily provided.

The following paragraphs provide summaries of the assessment results in each of the components. Each component is discussed in detail in later sections of the report.

1.1 TECHNOLOGY

Luzerne County's 9-1-1 center has been working diligently to implement and maintain technical and automated systems to improve the provisioning of emergency service to its citizens and visitors over the last two years. The telephony network structure, using Verizon to collect and route all emergency calls, is a benefit and simplifies the operation. Administrative staff handles all projects and support duties while working to their best capability to finish essential technical projects and upgrades. Regrettably, the volume of calls for service and the growing number of technology projects challenge staff to perform all aspects of each project to the best of the staff's abilities and consistent with industry best practices.

Like many 9-1-1 centers in similar situations, budgetary constraints seem to have created a focus on completing critical tasks within fiscal restrictions and prioritizing requirements relating to less tangible or less immediate needs accordingly. Broad-based support for center operations is required to overcome financial constraints faced by the center. Support must come from all

Kimball
L. Robert Kimball & Associates
Architects and Engineers

Assessment Report
of the Luzerne County 9-1-1 Center
Submitted to
Luzerne County, Pennsylvania

stakeholders, including elected officials, Emergency Management Agency (EMA) management, public safety answering point (PSAP) personnel, and field service providers.

The technology segment of the assessment report addresses the automated and technical systems required to support emergency services in Luzerne County. Accordingly, the following recommendations are made:

- All future upgrades for computer aided dispatch (CAD), Zetron, Sentinel, and ESRI should be evaluated and acquired if there are any functional or reliability benefits to be realized by the upgrade. Completed

- The GIS mapping database should be brought up to PEMA Phase II requirements. Meeting the standards will make specific PSAP expenditures eligible for reimbursement from Act 56 monies. *In progress. Also conflation, addressing and CAD upgrade to ArcGIS is in process. Utilizing ESRI GIS mapping technology

- The records management system (RMS) should be evaluated and put into use both internally and to external agencies, thereby helping public safety administrators with planning and allocation of resources.* In progress. Doug Pape and others are on the Crime Committee working towards one. Project was discontinued by previous administration

- The virtual private network (VPN) project should be completed as soon as possible. Secure, remote access to data offers several benefits for the PSAP and field service providers alike. *Completed and functioning.

- The County must re-evaluate the practice of having virtually all projects, support, and warranty work done in-house. The present situation shows signs of staff being overburdened. Further, the County incurs an unnecessary liability in that as little as two retirements, resignations, staff reductions, illnesses, or any combination thereof, could leave emergency services without proper systems support. *Service contracts and options being sought. This will be a tremendous expense to the county. Providing the service in house has saved the county millions of dollars, allowing new projects that were previously unfunded to continue. "more bang for the buck". How many technicians does the average vendor have? This is a common issue within the industry.

- The console furniture must be replaced to allow mapping screens to be added. Newer, ergonomic furniture offered now would also improve working conditions and morale for dispatch personnel. *Furniture has been replaced.

- The heating, ventilation, and air conditioning (HVAC) system should be professionally evaluated for suitability in the 24/7 communications center environment. The present system is installed hazardously close to electrical devices in the main equipment room. Replacement or modifications may be considered to achieve a more consistent distribution of cooling air and humidity control. *Has been evaluated. We have changed the diffuser, added hot water to temper the cold air, and added a humidification system.

- The County should evaluate Plant/CML's upcoming IP-gateway devices that will allow their legacy customer premise equipment (CPE) to interface with next generation networks. An analysis of the cost to add gateway devices versus the cost of completely new technology should be performed when solid figures are available. CML gateways are not available at this time as is next generation networking, so there is little urgency at this time. * CAT 5 lines and jacks run to each position and we are ready for this technology

Kimball
L. Robert Kimball & Associates
Architects and Engineers

Assessment Report
of the Luzerne County 9-1-1 Center
Submitted to
Luzerne County, Pennsylvania

when available for implementation. As stated, this is not available yet, what does this allow us to do? Replaced with the Cassidian Sentinel Patriot system.

1.2   FACILITY/INFRASTRUCTURE

One purpose of any emergency communications facility assessment is to determine any deficiencies that should be addressed to improve effective and reliable support of the agency's emergency communications services. This report is one step for continuing the County's transition into a model for others to follow and, most importantly, sustain improved quality of service to the public.

The facility/infrastructure section of the report provides an overview of the site, building, support systems, and critical infrastructure. Observations are derived from staff interviews, a comprehensive site survey, and existing facility documentation, such as building plans and network diagrams. These findings are intended to identify areas where growth may be supported and service may be enhanced.

During the site survey, County staff indicated a prior study analyzing the electrical distribution system throughout the building had been done in February 2006. This study, performed by Cavanaugh Electrical Contracting, Inc., (Cavanaugh) recommends numerous conditions for modification. At the time this report was prepared, not all the modifications had yet been completed. *We asked for this study and work continues. We requested this evaluation due to our concerns.

Lack of funding or qualified, available staffing is believed to be the cause for the electrical issues remaining unresolved to date. These deficiencies in fundamental resources may be symptomatic of larger obstacles through which the center management is working. To achieve maximum benefits from the recommendations, the County must continue to seek work-arounds and complete the recommendations' modifications as soon as they are able.

Several key facilities' recommendations, representing the most critical facilities-based issues, are listed below. The complete list with a fuller accounting is located in Section 3.6 of this report.

There is insufficient staff to perform all of the support, maintenance, and project tasks at this time. The County must define a proper action plan and assess and prioritize all tasks required to maintain the desired level of service. Financial and personnel resources must be projected so overall cost comparisons can be performed between hiring additional staff and outsourcing some maintenance or project work.

- High- and low-voltage systems in the equipment room should be separated as much as practical. It was designed that way in 1998. They are separated as far as possible in the existing building design. We were not part of the original design in 1998.
- Water lines for the humidification system should be re-routed further away from sensitive electrical equipment.
- Grounding must be evaluated throughout the center. Completed.

- The chairs and console furniture should be replaced with heavy duty, task-specific equipment. A layout improving workflow should be instituted with this project.
  * Completed
- The FM200 fire suppression system should be tested while under outside contract, to ensure it can perform as required. Done.

1.3   OPERATIONS

The scope of work related to operations assessment included a review of management practices, organizational structure, call-processing methods, a staffing analysis, and a policy review. The assessment criteria are based upon industry standards and best practices and Kimball staff experience. The methodologies used to perform the assessment included multiple employee interviews and field observations to ensure the accuracy of the data collected as well as the review of pertinent documents.

Observation of PSAP operations was performed on all shifts. The observation time was optimized by the team's use of informal discussions with on-duty staff while noting call processing. While explaining PSAP specific procedures, telecommunicators discussed other matters, such as the need for CAD and project completion, elimination of radio bleed over, and human resource concerns.

In total, fifteen PSAP supervisors and telecommunicators were interviewed. Additionally, the interview process included the opportunity to meet with PSAP management and key County stakeholders, including:

- Chief County Clerk
- Chief of Public Safety
- Deputy Director/Technical Support Manager
- PSAP Manager
- Deputy Coordinator of EMA
- Data Manager/Technical Support Supervisor
- Technical Support Supervisor
- Training Supervisor

Based on the findings and observations collected in the project, recommendations to Luzerne County are made in the operations section concerning the following specific areas:

- Minimum number of staff required per shift
- PSAP staff requirements as a whole
- Career path planning for staff
- Personnel management

1.4   RECOMMENDATIONS INCLUDE ADDITIONAL CALL-TAKER POSITIONS, CREATION OF ASSISTANT SUPERVISOR POSITIONS, AND ADDITIONAL FOCUS ON CAREER DEVELOPMENT OPPORTUNITIES FOR STAFF. WE AGREE WITH ABOVE STATEMENTS AND PLANS.ACCREDITATION READINESS

Included in the RFP released by Luzerne County for a best practices review and analysis of the Luzerne County 9-1-1 Center, was the requirement to conduct an accreditation readiness assessment as a precursor to entering the Public Communications Accreditation Program through the Commission on Accreditation for Law Enforcement Agencies (CALEA). The County seeks validation of progress and identification of outstanding issues to be resolved in preparation for the accreditation program.

Written directives, policy, procedure, and planning documents represent the heart of the CALEA assessment process. Understanding the County's goal, Kimball has given particular attention to the policies and procedures promulgated by the 9-1-1 center. Following determinations of compliance with Commission standards in the directives system, agencies must demonstrate they actually perform their responsibilities consistent with their own directives.

The Accreditation Readiness Assessment process provides a review of the agency policy manual and other directives for compliance with standards promulgated by CALEA for the Public Safety Communications Accreditation Program. In the course of the assessment, Kimball has provided recommendations for policy development and recommendations for implementation of a process for successfully accomplishing the CALEA accreditation program requirements. Compliance status for every standard has been evaluated, and where appropriate, recommendations for required action are provided.

We note the Luzerne County 9-1-1 Center had not yet officially enrolled in the CALEA program at the time of the review. Significant costs are associated with the enrollment and achieving appropriate justification and funding alignment has been a complex task. The agency has elected to proceed with the readiness assessment to provide a "jump start" to the program implementation once official enrollment occurs.

Despite not being officially enrolled, the center has been able to demonstrate compliance with CALEA standards defined as "Mandatory" for 22 percent of the standards, and compliance with 16 percent of "Other than Mandatory Standards." CALEA requires compliance with 100 percent of applicable mandatory standards and 80 percent of applicable other than mandatory standards. The level of compliance already achieved is an excellent example of working ahead toward an important goal. Details regarding the assessment process and findings are provided in Section 6.4 and in the worksheets provided separately to the center management staff.

In addition to the detailed recommendations provided later in the report, high-level recommendations relating to the accreditation initiative are provided below:

- The agency Chief Executive must continue a sustained commitment to accreditation as a high priority to ensure success. The accreditation manager must be given the time and

resources to complete the needed tasks. All agency staff should be given familiarization information concerning the effort, the value of the program, and be encouraged to participate and support the program. The CEO asked for CALEA years ago and is 100% in favor of this. CALEA will remove personalities and changes in administration, and comply with national standards.

- Agency progress must be monitored to ensure required tasks are delegated and performed. Accountability for performance of assignments is important in maintaining focus and progress toward the completion of preparations for the official onsite assessment by CALEA representatives.

- Agency employees should be involved in the process, and new/revised policies and procedures should be reviewed with personnel to assess feasibility and to gain support.

- Feedback and updates regarding progress toward accreditation should be provided to personnel to encourage participation and sustain interest.

CALEA has been started in September 2007. We have received a time extension to February 2009 for completion. Please note CALEA e-mail update.

2.   PROJECT OVERVIEW

Kimball is pleased to present this assessment to the Luzerne County 9-1-1 Center. On September 14 and 15, 2006, representatives from Kimball met with the emergency services team in the County's 9-1-1 center. Project objectives were discussed to gain a mutual understanding of the desired goals. Interviews were conducted, detailed records presented, and observations recorded for later evaluation and comparison with established industry best practices and standards.

It is clear from these meetings that Luzerne County elected officials, the Director, EMA, and management and staff of the 9-1-1 center desire to provide their citizens and visitors with the best emergency services possible. The assessments and recommendations contained in this report are intended to assist them with their goals.

The report is structured as an assessment of what conditions exist at the present time. It represents a snapshot of practices, systems, facilities, policies and procedures used to provision public safety communications in Luzerne County. Detailed descriptions are provided to offer an understanding of the operational model in place and the conditions affecting the work and the people working in the 9-1-1 center. Best practices are described when applicable to substantiate Kimball recommendations.

The assessment conducted by Kimball is presented in four components: Technology; Infrastructure/Facility; Operations; and Accreditation Readiness. Although the review examines the agency in a segmented, or compartmentalized manner, and comments on the component parts individually, in the operational and administrative environments of the 9-1-1 center, all parts are integrated and impact on each other. What affects one component, will affect the others.

In the conclusions section of the report, Kimball provides our impressions of the overall efficiencies, effectiveness, and quality of service, as a sum of the parts that comprise the center. The final section of the report describes recommendations based on industry-accepted best practices and, where applicable, the actions required to achieve the benefits associated with best practice compliance.

2.1   BACKGROUND

Established in June 1997, the Luzerne County 9-1-1 system includes fourteen 9-1-1 trunks, seven each from Verizon's Bloomsburg and Scranton tandems. The County has eight wireless 9-1-1 trunks that route through the same tandems as the wireline trunks, four from each.

All call traffic is received on a CML ECS-1000 automatic number identification/automatic location identification (ANI/ALI) controller and distributed to the call-takers at the PSAP by way of computer integrated telephone positions. These positions display the ANI and ALI of the call, as well as the Phase I and Phase II information for wireless calls. There are currently six call-taker positions and 12 dispatch positions. Although they normally provide for one type of service,

all positions are capable of call-taker and dispatch services. We have 6 call taker and 13 dispatch positions now

ALI is handled through the Kimballl ALI database management system (DBMS). The ALI DBMS is connected to Intrado and TCI through dual 56k data circuits, with each circuit routed separately for diversity. When a call is received, the ALI DBMS matches the ALI with the ANI information and returns it to the CML ECS-1000, which then delivers the information to the CAD system. Luzerne County staff maintains this stand-alone ALI system, and enters and verifies the ALI updates from the local exchange carriers (LECs) and competitive local exchange carriers (CLECs) against the master street address guide (MSAG) for validity. The County's MSAG also resides within the ALI DBMS. ALI DBMS is now handled through Verizon.

Luzerne County utilizes a Logistic Systems first-call CAD system. The CAD system has an integrated mapping component, which will display both wireline and wireless calls for service. The CAD system allows for the tracking of the 49 police, 100 fire, and 57 EMS departments in the County. There are also approximately 20 additional miscellaneous departments for which the County dispatches. Currently Tiburon CAD System (IQ Response)

All audio, telephone calls, and radio are recorded on a Dictaphone Freedom FT 64-channel recorder. This system also includes the queue management system (QMS) software, which allows for quality assurance reporting on both live and archived call traffic. Effective in July 2007, this system will be replaced with a Voice Print Incorporated system, which will significantly enhance functionality. Complete

2.2   METHODOLOGY

Kimball employs a proven methodology of conducting reviews, audits, assessments, planning, and consulting support. This project was conducted in phases, and it utilized a multi-disciplined team of associates to satisfy the project requirements.

A key element to the Kimball process is the deliberate effort to gain an understanding of the project objectives, the client business model, and the desired outcome of the effort. Significant time was spent onsite for data collection. Key personnel were identified and interviews were conducted. The Kimball team observed operations first hand, and reviewed agency documentation, including the Standard Operating Policy Manual, the County Personnel Manual, and the Collective Bargaining Agreement with telecommunicators.

Kimball conducted analysis of the collected data and compared the data to accepted industry best practices and standards, including the Association of Public-Safety Communications Officials (APCO), National Emergency Number Association (NENA), Commission on Accreditation for Law Enforcement Agencies (CALEA), National Fire Protection Agency (NFPA), and International Organization for Standardization (ISO).

The report addresses findings and recommendations concerning the organizational, staffing, technical, operational, service, facility, and human resource issues brought to our attention. In

addition, the report addresses opportunities to be seized to support continuing, progressive development of the Luzerne County 9-1-1 Center.

3.   FACILITY ASSESSMENT

3.1   GENERAL

The County operates a consolidated PSAP at 100 Young Avenue, Wilkes-Barre, Pennsylvania. Situated on a hillside, it is fairly well isolated from other buildings and properties with gated, secure access. The entire property is enclosed with chain link fencing. Parking appears to be adequate for the number of employees, building size, and mission. Visitor and employee parking areas are separate, with visitors directed to the front and the larger employee lot to the side. The ample size of the employee lot also allows for storage of the counter terrorism/disaster response trailers towards the rear.

Interviews note that additional storage facilities plan to be located onsite behind the main building to resolve storage constraints in the PSAP, particularly in the main equipment room.*Warehouse has been obtained and many items that were an issue have been resolved. Warehouse no longer used.

A self-supporting radio tower, its associated equipment shelter, the facility backup generator shelter, and a storage shed are located further to the rear of the site. A fenced and locked tower compound also provides a temporary storage area for propane tanks used to fuel backup generators at remote tower sites. The County radio system is comprised of 14 radio sites (actually 18), including its main tower located at the center. This network of radio sites is connected by point-to-point microwave hops. The equipment at the primary radio site is housed in an exterior shelter adjacent to the tower. The main building provides power and communications connectivity to the shelter by underground metallic conduits. A recent lightning strike was reported to have inducted current over these lines, causing equipment damage inside the building.

The relatively new facility was built in 1996 for the specific purpose of housing 9-1-1 operational and support functions. The floor plan provides a glass enclosed atrium and a main entrance with a security checkpoint to a hallway traversing the perimeter. Support and administrative offices are placed to the outside of the structure, with the main operational areas further secured in the center. The primary telecommunications equipment room is located to the rear, with secure entry points available from the communications center and a backdoor leading outside by way of the main electrical room.

3.1.1   Administrative Area

At the time of the survey, all offices were occupied, and storage areas were full. To create more space at the center, the County is currently moving non-essential storage offsite to a County-leased warehouse and storage sheds in the tower compound.

Centralized file management was implemented in the last several years. Approximately 10 years of local warrants files are being maintained in paper format within the facility. Future modifications in technology and operational procedures may be considered to free up valuable storage space.

3.1.2   Employee Amenities

The facility provides employees with personal storage in the locker room, a staff lounge, a quiet room, and other amenities. All restrooms for the facility are located in the locker rooms. Some employees have complained that there are too few toilets for the capacity of the building. However, the quantity is within the normal range, as typical architectural design practice is one stall for every 50 occupants.

The kitchen is equipped with a refrigerator, stove, microwave, coffee maker, sink, and water cooler. Each shift has a dedicated section of locked cabinets providing storage for food and other essentials. The staff lounge offers a location for employees to break from their duties, eat their meals away from their workstations, and watch television.

3.1.3   Communications Center

The 2,450 square foot main communications center contains 18 total positions. The supervisor's position is situated in the middle of a long wall with call-takers to one side, a records/warrants position (SCOPE) on the other, and dispatchers occupying the remaining space. In addition to being a fully equipped call-taking/dispatch workstation, the supervisor's position also has a local power plant general alarm, system monitoring equipment, security camera monitoring equipment, and an administrative workstation. It is currently located on an elevated platform; however, County personnel indicate the platform seems unnecessary, and the raised section will most likely be eliminated when the new furniture project occurs. Floor has been redesigned and changed. Elevated supervisors platform has been removed.

The records/warrants position (SCOPE) is utilized for processing local warrants and doing records checks. The position requires substantial storage, as the County is reportedly storing paper records dating back to the center's inception almost ten years ago. In addition to a large shelf of files adjacent to SCOPE, the supervisor's position also holds several file drawers full of paper records.

Six call-taking positions are expected to migrate to a fully equipped "dispatch-ready" configuration. Currently, they each have two LCD displays and two keyboards. There is also a television on the display shelf, which is used for training purposes. Dispatch ready will occur with current plans for radio console upgrade.

Six police and four fire dispatch positions perform different missions, but are identically equipped. All 10 positions have four LCD displays and two keyboards. One position is also equipped with a stand-alone, State-provided terminal for CLEAN/NCIC queries.

Additional storage at each position is provided by two plastic crates, loosely stacked on top of each other. Other ancillary items on the operations floor include two ceiling mounted televisions, four simplex type Netclock display units (two of which are not in use), a message board for alpha paging notification, two fax machines, a scanner, and a printer.

3.1.4   Console Furniture

All console furniture in the communications center is comprised of Motorola Centracom II consoles installed when the building was built. Provisions for computers, monitors, and keyboards are minimal at best. Furniture has been upgraded. New state of the art WATSON

furniture and chairs have been installed for the best technology available for equipment, storage of files and telecommunciator comfort.

Personnel advised the Kimball researchers the County is in the process of replacing the original Centracom II consoles with modern, ergonomic 9-1-1 specific furniture. New furniture will allow for proper placement of computers, monitors, keyboards, radio equipment, and storage of reference materials. New furniture is also required to afford placement of a dedicated GIS mapping screen as part of the PEMA Phase II initiative. Replaced with Watson furniture

Expectations for physical growth of operations are largely determined by comparing current call volumes with future projections, while also considering emerging technologies. Once the growth projections have been established, updated quantities of call-taking/dispatching stations and associated equipment can be planned accordingly. The records management systems required to enable these projections are expected to be implemented in the very near future with the completion of CAD, call accounting software, and network upgrade projects.

3.1.5   Ergonomics

Lighting and sound in the communications center seem to be the largest issues reported by County staff and noted by the Kimball survey team. The type of lighting used is a mixture of direct and indirect overhead fluorescent fixtures, which tend to cause bright spots and glare on computer screens. Task lights were not observed at the individual workstations. The call center has softened architectural features, such as sound absorbing wall and ceiling materials; however, it appears the layout of the room and the functions of each position are such that distraction is inevitable during periods of heavy call volume. Each console now has individual lighting.

The current console furniture has little to no adjustability for the wide range of personnel using it. In conjunction with the console furniture upgrade, the center's administration plans to replace the chairs, which have also reached the end of their life cycle. In preparation for this upgrade, County staff has been experimenting with various new chairs on loan to the PSAP to find suitable replacements. The new consoles and related equipment are expected to address the described ergonomic concerns. Again, new consoles are fully adjustable. Completed.

3.1.6   Training Room

The training room is just outside the hardened area of the building, adjacent to the equipment room and communications center. Similar to the equipment room and the communications center, there is a raised floor system in this area for distribution of cabling to the workstations. The room is equipped with two functional console positions and one dispatch position, identical to those described in the communications center. The equipment is used to train personnel for call-taking and dispatching duties.

3.2 BUILDING SYSTEMS AND EQUIPMENT

3.2.1 Telecommunications

Overall, the telecommunications infrastructure is typical of a center this size and age. The 9-1-1 center staff maintains and services all of their own equipment, with the exception of two systems that are still under the original service contracts. The large telecommunications equipment room is approximately 1,000 square feet and is located adjacent to the communications center, towards the rear of the building. This room houses all of the automated systems used by 9-1-1 dispatchers and support staff. The FM200 fire suppression, UPS, HVAC humidification system, broadband cable and fiber service entrance points from Verizon are also in the room.

Digital systems, telephony, network infrastructure, and the racks containing these systems are generally located at one end of the room, while the HVAC humidification, FM200, transformers, and UPS battery banks are located at the other end. The 9-1-1 network connectivity and broadband access is achieved via copper and fiber cable entering the site through redundant pathways from two independent Verizon tandems.

The telecommunications equipment room has a perimeter bonding and grounding system. This system includes two conductors routed around the room, one below the raised floor and the other overhead. Both conductors and several leads are tied to a common ground buss bar, which is then tied to an electrical ground connection. For the most part, electrical and telecommunications systems grounding appears sufficient. However, in some areas, metallic components and active electronics do not appear to have adequate bond to ground. Additional in-depth analysis of the building and equipment grounding should be completed to ensure that personnel and systems protection meets accepted best practices standards. All grounding issues have been addressed.

This room is also used for the storage of miscellaneous materials. There are several shelves and boxes located throughout the room, as well as spare parts and equipment. A plotter obstructs an aisle way. In some areas of the equipment room, necessary spacing between cabinets and wall-mounted panels is less than three feet. In other areas, storage shelves block access to equipment. A copper drain line routes directly above telecommunications equipment and high voltage electrical equipment with no leak protection. Most items have been removed and placed into storage. Again, the original engineers designed the facility. This is clearly beyond our control. We did not design the facitlity. We have very limited storage

Telecommunications cabling distributed to the outlets on the call floor is differentiated by color code; the cabling infrastructure is not consistently labeled both at the workstation and at the patch panel. Standard outlet boxes or fixed termination points for each workstation were not observed. There is no structured cable management at the workstation end of each run. All cables are labeled and color coded. This was completed after the furniture change.

All staff members with access to the operations area also have access to the logging/recording equipment, located in an open equipment cabinet in the equipment room. The unsecured access to logging/recording equipment is inconsistent with best practices, and the opportunity for tampering can enable legal challenges to 9-1-1 records that are best avoided whenever possible. Only management have authorized access, furthermore all computer equipment and networks are password protected including the digital recorder.

3.2.2   Electrical

As noted above, the survey revealed several conditions wherein modifications were indicated (i.e. missing blank plates in panel box, panels unlabeled, and equipment not securely mounted to the structure for stability). At the time of the Kimball assessment, the center's staff was working to address all recommended corrections.

Electrical service to the building is delivered by separate underground feed. In-building electrical system capacity appears to have sufficient surplus for additional loading; however, this cannot be verified as all circuits and panels are not labeled. Spacing and clearance around electrical panels and switchgear does not appear to be in full compliance with electrical code requirements. In 1998 when facility was built we assume it met the code requirements? Only the rear tower rack outlets did not have labels and since they have been labeled.

A generator located in the rear of the building backs up the facility. Two UPS battery banks are reported to provide up to eight hours of power each, under full load. We have 3 independent UPS systems, each one provided approximately 8 hrs. of run time on the current 33% average load.

3.2.3   Structural

The building's shell is comprised of a structural steel column grid with concrete/brick finish. A flat roof, supported by steel decking and open web steel joists, covers the majority of the structure. The only area not covered by this type of flat roof system is the atrium portion of the front entry. There is a pitched brick parapet wall defining the separation of the two systems. At the time of survey, this brick wall was covered with a plastic tarp. It was reported that mortar had worked loose, and the assembly was falling apart. This problem seems to be an isolated condition, and it is scheduled for immediate repair. If proper repairs are affected promptly, permanent damage to the substructure should not occur. Tarp has been removed and the problems have been addressed by county engineers.

Inside the building, all support systems observed appeared to be sufficient and present no obvious hazards. The hardened area is located in the center and rear of the building. Blast resistant glass doors and windows comprise the main entrance. The operations floor and telecom equipment room walls are made of concrete blocks.

3.2.4   Mechanical

The HVAC system originally installed with the building has been problematic. The heating component reportedly dried the air to the extent that static shocks impacted on working conditions and the performance of sensitive electronic equipment. In an attempt to rectify the situation, an outside contractor designed and installed an air humidification system. Unfortunately, the outside contractor located this boiler-based system within the telecommunications equipment room, with copper drain lines routed directly over vital telecommunications equipment, electrical transformers, and the associated distribution panels. A steel pan has been designed, and a tarp will be in place to prevent damage to equipment in case of a water leak. **This concern was raised during the initial install. Needs to be evaluated. No longer in use.

HVAC system redundancy/augmentation in the equipment room is handled by tapping into the supply duct for the operations floor. Reportedly, on two occasions over the last 10 years, a system malfunction created a need for additional cooling in the equipment room, requiring vents to be manually opened or closed when time and workload permitted.

The telecommunications equipment room has two FM200 fire suppression systems. One system is designed to handle the space below the raised floor and the other is for the equipment room itself. When installed, the area protected by one of these systems is typically pressure tested to ensure the suppression agent is sealed in with the fire. This improves system capability to efficiently evacuate the oxygen, replace it with an inert agent, and subsequently starve the fire. Because some penetrations in cabling pathways and air ducts have been left open, it is unknown if these areas would pass a pressure test. System is under contract and no issues have been reported.

3.3   INITIATIVES, SUPPORT, AND MAINTENANCE

As noted previously, the Luzerne County 9-1-1 administrative/management staff traditionally has provided nearly all of their own support and warranty work. Staff members are appropriately certified to perform the work. There are only two outsourced service contracts, the HVAC and the FM200 fire suppression systems. If staff did not perform all of these functions over the last 10 years, many projects would not have been completed. With these tasks being completed "in house" it has saved Luzerne County millions of dollars over the years. 9-1-1 still has money left in the original bond from 1998, which demonstrates significant cost savings for the county.

The practice of performing maintenance and support, as well as new technical project work with in-house staff has undoubtedly saved the County a great deal on support/maintenance contract costs over the years. Having technically trained and certified personnel on the management team provides certain benefits to the agency and provides opportunities to the members to perform a diversity of tasks and responsibilities.

Regrettably, interviews also reveal that staff members are stretched by this business practice. The staff is noticeably overburdened. Interviews revealed routine scheduling of preventative maintenance is a struggle, as staff does not have adequate time. Interviews with outside agencies supported by the center noted a perception of stalled projects. Management staff who provides the support services displays a commendable, strong sense of ownership and dedication to performing these tasks. A great deal of collaboration between personnel is required to ensure no system is left unsupported.

The strong reliance on internal resources for maintenance, support, and project development highlights a vulnerability to the County. Any personal misfortune, reduction in force, or personnel issue, or combination thereof, could have undesirable consequences for emergency operations in the PSAP. Many vendors who provide the same maintenance capabilities only have 1 technician available, so this may be true with outside vendors as well. Verizon for instance only has 1 technician that responds for our CML phone system. We have no objections to paying to contract out this work and have implemented service and maintenance contracts for most, if not all of our systems.

3.4   SECURITY AND THREAT ANALYSIS

The location and layout of the site has several positive security features. The entire site is fenced in with initial access granted by motorized gate. Proximity card reader or intercom and remote electronic door release grant access to the site and the building.

The exterior of the building has six closed-circuit cameras monitored in the call center; however, it was reported that these cameras have lost their pan/tilt/zoom capabilities and remain in fixed positions. County staff commented that certain cameras are known to fog up at times, which may indicate the defrosters are malfunctioning. Cameras are functioning, and additional internal cameras have been added.

The hardened operations facility is centrally located within the building. The general layout provides a buffer of hallways, administrative and common use rooms around its perimeter. Additional protection of the hardened area is provided by blast resistant glass and proximity card access. At the time of survey, no interior security cameras were observed. Added with camera upgrade in 2012-2013

3.5   BACKUP SITE

The County plans to establish a full-featured backup site in the emergency operations center (EOC), located next to the County's jail complex. Functioning backup facilities are a critical component of emergency services, particularly when the PSAP has demonstrable vulnerabilities that could conceivably force an evacuation. Ideal conditions would provide for seamless transition of all services and functionality to this secondary location, allowing County staff to maintain operations for an indefinite period of time. While in "stand-by" mode, the backup facility can be utilized for offsite training as well as emergency simulations, tests, and drills.

Currently, the County's backup site functionality is dependant on implementing a high capacity microwave link to the PSAP, which will allow the automated systems to efficiently connect between the two. With this system in place, the backup site affords redundancy to the automated systems by allowing offsite backups to be stored in real time for the CAD, RMS, GIS, and administrative databases.

At the time of Kimball's visit, the backup site had essentially been taken over by state and federal agencies working on disaster recovery from the floods in June 2006. There were several key phones, two older model radio consoles, and paper records stored efficiently in self-contained, portable boxes. There is a self-supporting tower adjacent to the facility with supporting radio equipment being located in an adequately sized storage room in the rear corner of the building. No interior bonding/grounding was observed. Additional telecommunications equipment is located in the back of a copy room, where the building administrative phone lines and local network equipment are maintained. Climate control, fire suppression, or security requirements did not appear to be completely resolved at the time of the visit.

As configured during the visit, the backup site would provide limited functionality if activated for disaster operations. Management personnel recognize this issue, and they have planned several projects to greatly enhance the capability of the backup site. These projects have been given high priority as best practices dictate that public safety operations have a working disaster plan in place. Regrettably, the completion of this project is hampered by the overwhelming workload tasked to the center's staff. Four Zetron dispatch positions have been installed, and back-up site has been completely redesigned and back-up UPS has been replaced. Additionally a 100Mbps link has been installed and will supply redundant communication capabilities between 9-1-1 and EMA in case of microwave failure. This link will also enable full communication with the Luzerne County courthouse fibre and network.

3.6   RECOMMENDATIONS

Staff interviews and visits to the primary and backup facilities indicate there is a wide and varied range of improvement projects in progress or slated to begin soon. Kimball notes the commitment of the 9-1-1 center administration to improving the quality of service to its visitors and residents. The level of cooperation, forthcoming attitude, and quality of data provided to the assessment team during site visits is commendable and greatly appreciated.

While discussing the maintenance and support functions provided by management personnel, senior staff members consistently express concerns regarding the competency of service providers from local vendors. It was apparent that senior level staff would do what they felt was necessary to maintain systems and equipment proficiently, while simultaneously fulfilling routine daily functions dictated by their positions, whatever the personal cost. The volume of work and the long hours worked by the management team suggest there may not be enough expertise to go around, and technical support is stretched very thin.

Based on the criteria conveyed in the above meetings and site surveys, Kimball makes the following facilities recommendations to the County:

- Preparation of a long-range facility management plan with advanced budgetary estimates will aid the County in the identification and prioritization of required resources. Identify and rectify funding and staffing deficiencies by augmenting in-house staff with specific technical expertise, using service contracts and/or additional hiring and training. Agreed. Budget Costs will need to be examined.
- A cost benefit analysis should be performed comparing service contract costs and added staff expenses to determine a course of action for maintaining the infrastructure to accepted best practices standards. Agreed. Verizon for 1 year, just for phone maintenance is $130,000+. For county employee to train on system, there is an approx. 1 time cost of $10,000. Completed, contract through Frontier and Verizon in place for maintenance.
- Maximize use of available offsite storage, or acquire more if necessary, for nonessential items, providing for additional office space as necessary.

- Review current record storage procedures to allow greater use of digital storage wherever possible in order to minimize space requirements. In progress with additional networks.
- The current console furniture is nearing the end of its life cycle. Consider procurement of new ergonomic console furniture to replace all workstations in the communications center, the training room, and at the backup facility. completed
- The new furniture should have sit-to-stand functionality, task lighting, personal comfort controls, and sufficient space for monitors, computers, and necessary reference materials. Completed.
- The new furniture layout should be configured in a manner minimizing interference from adjacent workstations, without drastically hindering interpersonal communications when necessary. Dispatchers' input should be solicited in order to devise a harmonious layout that coincides with or improves the workflow. Completed.
- Replace all chairs with the console furniture. Heavy-duty chairs designed to withstand the rigors of 24/7 use are typically more economical over their lifespan. Typical single shift task chairs could be used in the training room and at the backup facility. Completed in conjunction with the furniture replacement project, an organized cabling system should be installed. Trace, test, and label all cabling; replace cabling that does not meet necessary transmission standards. A practical color coding system should be maintained to aid troubleshooting. Completed.
- Cabling from the equipment room should terminate in an approved recessed floor box at each workstation. Floor boxes should accommodate power and telecommunications services while maintaining required separation. Completed. The main telecommunications equipment room should be limited to low voltage telecommunications systems and equipment. Segregate high voltage equipment and other equipment not directly related to the function of the telecommunications systems. Completed with phone system upgrade in 2012.
- Routing water pipes of any kind in an equipment room presents a potential hazard. If the humidification system and drain lines absolutely must remain in place, some form of drip/leak protection must be installed between the piping and any susceptible equipment.
- To increase airflow and provide for better heat dissipation around telecommunications equipment, spare parts and miscellaneous materials storage should be reduced as much as possible. Completed with new console furniture.
- The logging and recording equipment should be secured. If the equipment room must remain unlocked, at minimum the cabinet housing the equipment should be secured. Password protected and electronic locks in place.

Bonding to ground should be established per Motorola R56 specifications, or equivalent, to protect equipment and personnel. Additional grounding should be completed when new radios and consoles are installed and grounding should be updated. R56 only calls for 5 ohms. We should strive for 2 OHMS building and 2 OHMS tower.

- Lighting in the communications center should consist of indirect overhead lights augmented by individual task lighting, making for a more pleasant work environment and helping prevent computer screen glare. Done. Comm Center also has direct and indirect lighting.

- New electrical cabling installed for new console furniture or additional telecommunications equipment should also be appropriately labeled at the panel and at the outlet. Done

- Repairs to the exterior brick face should be completed before winter to minimize damage to any substructure from water penetration and subsequent cracking due to freeze/thaw cycles. Has been evaluated and taken care of.

- The County should immediately evaluate the entire HVAC system for suitability in a 24/7 communications center. Interviews noted that air quality and drafts were a major source of concern for both line and administrative personnel. Difussors were replaced several years ago Maintenance has addressed this. Replaced HVAC units for PSAP floor and equipment room in 2012.

- Engage an HVAC engineer to survey and recommend a reliable redundant solution to existing system issues. Upgrades in this area can increase the life cycle of electronic components and lessen the chance of a system failure due to lightning or static electricity. Replaced HVAC units for PSAP floor and equipment room in 2012.

- While still under service contract, the spaces protected by FM200 should be reevaluated and/or pressure tested to ensure the system performs as designed. Agreed. Tested and completed

- Establish, implement, and record preventative maintenance procedures on all systems. Done by maintenance. In process. Backed up on county network system daily (off site)

- Establish budgetary cycles for scheduled replacement of obsolete or obsolescent systems and equipment. In process in conjunction with state funding plans

- Although controlled access to the site by a single motorized gate increases security, emergency access and egress is impaired if the gate is rendered inoperative. The County should consider installation of a secondary gate for emergency use. We have 2 gates currently and we have added a manual personnel gate in the rear of the facility.

- Evaluate the function and performance of all exterior cameras currently mounted on the building. If deemed necessary, replace the pan, tilt, and zoom motors, heaters and clean lenses to minimize fogging and distortion of image. Completed. Camera system replaced in 2013. Define range of capability required for backup site functionality to determine seating and automated systems requirements. Back up center is functioning. Further enhancements are under way to enhance back up center.

- Use defined seating and equipment needs to determine backup site space requirements necessary to accommodate personnel and equipment. Additional changes have been made at EMA. Determine and execute a plan of action to achieve the desired level of functionality for the backup site inside the EOC. Backup center is operational.

- The equipment room at the EOC appears to have sufficient space to accommodate automated systems for the backup site. This area and supporting infrastructure; i.e. generator, wiring, HVAC, security, parking, etc, should be evaluated for capacity and redundancy, and upgraded wherever deemed insufficient. If the EOC equipment room cannot provide the necessary systems and safety features, another alternative may be required. Parking is available in lot and on the street. Doors are electronic controlled access. UPS has been replaced, EMA has been decluttered and cleaned by moving storage from office to warehouse. Additional upgrades continue.

4. TECHNICAL ASSESSMENT

4.1 GENERAL

Calls for service can be handled at 18 positions: six call-takers, six police dispatch, four fire dispatch, one supervisor, and one CLEAN/NCIC. An additional three positions, two radio dispatchers and one call-taker, are situated in a separate training/meeting room. Automated systems are placed on Motorola Centracom II consoles that are approximately nine years old. The Centracom consoles mainly locate newer PC-based, computerized systems used to provision service. As of this year, Motorola no longer supports Centracom II workstations, and the design is quite outdated by current furniture standards. Furniture replaced with fully ergonomic Watson furniture.

Center management intends to upgrade the furniture and have also been experimenting with various new chairs to find suitable replacements. Each workstation has two stacking crates housing notebook records, standard operating procedures (SOPs), and supplies required for day-to-day work or manual operations, while two positions also have a rotating credenza filled with more procedures, notes, and supplies. No longer in place. All files are digitally stored now.

4.2 TELEPHONY

4.2.1 Customer Premises Equipment

The County uses a CPE solution specifically designed for enhanced (E9-1-1) telephony from CML Emergency Services. This CML equipment was installed prior to the opening of the 9-1-1 center in March 1998 and received upgrades regularly. These specialized CPE systems are designed to handle the unique demands and interfaces required for present day E9-1-1 service. Capabilities like line control, trunk transfer, multiple data interfaces, and three party calling capabilities must be very specialized to work efficiently with the network systems employed by the telephone service providers to reliably handle emergency calls. Upgraded in 2012 to Sentinel Patriot phone system

4.2.1.1 ANI/ALI Controller

The County uses the CML model ECS-1000 ANI/ALI controller in its main equipment room to receive and route emergency calls to dispatchers. The controller occupies two cabinets in the main equipment room, with four shelves accommodating the specialized interface cards required. The ECS-1000 is a mature and reliable system that is fully redundant, with no single point of failure in its basic design. The controller presently runs operating system version 5.2. Staff is satisfied with the performance of the ECS-1000. The center's administrative staff maintains the system. Upgraded in 2012 to Sentinel Patriot phone system

4.2.1.2 Workstations

Dispatch E9-1-1 positions are x86 PC-based CML Sentinels using version 5.2 software. Sentinel is loaded on high-end HP Windows 2000 Pro workstations, using a 19-inch LCD flat panel display. All dispatch positions have a Sentinel workstation and are able to receive and display 9-1-1 calls with enhanced information. Dispatchers interface with their workstations via standard keyboard and/or mouse commands. Caller location data is displayed on the Sentinel screen and can be transferred, or spilled, to CAD for use in an active incident. See 4.2.1.2

Telephone typewriter (TTY), hearing carry over (HCO), and voice carry over (VCO) calls are handled through Sentinel as a part of the basic functionality required for ADA compliance.

The instant recall recorder (IRR) function for the telephones is also handled through Sentinel, allowing dispatchers to quickly playback recent telephone conversations for lost or misunderstood messages requiring immediate clarification.

4.2.1.3 Administrative Console

The CML administrative (SMART) console is located adjacent to the ANI/ALI controller in the equipment room. System status can be monitored from this location, as well as reports on trunk utilization activity, calling numbers, etc.

4.2.1.4 Call Accounting Software

Call accounting software (CAS) uses Sentinel Stats version 1.1. The application records and provides detailed reports on 9-1-1 specific calls, network, and equipment statistics. Management is then able to utilize this information to help aid in staff and equipment utilization projections and general planning. Sentinel Stats has "canned," user-definable reports allowing ad-hoc reports to be generated. CML now offers a version 3, which should be assessed for use in Luzerne County. Sentinel Stats is PEMA compliant for Phase II operations and is a required component for wireless 9-1-1 in Pennsylvania. Upgraded to Aurora stats with phone replacement.

4.2.2   Administrative Telephony

The PSAP administrative telephone system is used to make outbound calls or notifications and receive non-emergency 10-digit calls. This functionality is provided through an interface between the Sentinel workstations and an onsite Nortel Meridian key phone switch. Upgraded in 2013 to a CISCO VoIP system

This interface and arrangement also allows backup telephone functionality by having Verizon re-route emergency calls from 9-1-1 trunks through to these standard 10-digit lines. The 10-digit calls can then be answered at the Sentinel workstations, minus the enhanced caller information. Radio dispatch positions also have a second, separate emergency backup telephone located inside the back of their Centracom consoles, adding yet another layer of redundancy to the County's telephony capabilities.

4.2.2.1 Voice Logger

The County uses fully redundant, rack-mounted Dictaphone Freedom FT (Fault Tolerant) digital voice loggers to record, catalog, and archive radio and telephone messages. The Freedom equipment is approximately five years old. The units are fully redundant and have a total of 64-channel capacity, with nine spare channels at the time of Kimball's visit. Has been changed to VPI technologies (Voice Print). Upgrading in progress and just approved.

Voice logging converts audio messages to digital files, catalogs, and then stores them on an internal hard drive array. The files can then be accessed and searched via regular Ethernet network links. These files are also archived periodically to DAT cartridges, stored, and rotated per County procedure.

County personnel plan to replace the logger, as it has not been as reliable as required since a lightning strike damaged several system components last year. The Freedom FT system is Phase II compliant and voice logging is a required component per PEMA standards. Replaced in 2007.

4.2.2.2 Alarms and Tie Lines

The County monitors an alarm from the local power plant, as well as alarms covering their own facility. There are three tie lines routing directly to the Susquehanna Nuclear Power Plant located in Luzerne County. These lines allow instant communications to the power plant and are not affected by outside call volume or telephone network conditions.

4.3   TELEPHONE NETWORK

4.3.1   Wireline

All 9-1-1 calls are transported by the LEC Verizon via dedicated trunks. E9-1-1 trunks route diversely from the Bloomsburg and Scranton tandems, arriving at and entering the PSAP via separate routes for maximum diversity and availability to the center. The trunk groups consist of seven wireline and four wireless dedicated trunks from each tandem.

4.3.2   Wireless

Verizon's network collects emergency calls from the wireless carriers into their network and selectively routes them through either the Bloomsburg or Scranton tandem, based on Phase I pseudo automatic number identification (p-ANI) information. Wireless calls route from the tandems through one of four trunks reserved for wireless calls from each tandem. Wireless carriers known to be operating in the Luzerne County area include:

- Verizon Wireless
- Cingular
- T-Mobile
- Nextel Partners
- Sprint

4.3.3   Competitive Local Exchange Carriers

CLECs also route their 9-1-1 calls to Verizon for selective routing and subsequent transmission through to the PSAP via one of the seven wireline trunks. Commonwealth Telephone runs two diverse trunks from six central offices, one each to Verizon's tandems at Bloomsburg and Scranton.

Verizon, acting as the collection point for all emergency calls, simplifies the County's network infrastructure. By using pre-existing Verizon trunks to carry all 9-1-1 traffic rather than purchasing new redundant trunks for every wireless provider, the County reduces total trunk costs and complexity in their equipment room, while enjoying the benefits of a professionally designed and maintained telephone network.

This arrangement also allows dispatchers to transfer misrouted E9-1-1 calls back through a Verizon tandem to another Verizon-connected PSAP with a one-button transfer, while preserving the enhanced location information. Counties presently served by this functionality include:

- Wyoming County
- Carbon County
- Columbia County
- Lackawanna County
- Schuylkill County

As wireless calls for service increase, the advantages of this arrangement increase as well. This is especially true, in part, due to the fact that wireless calls are the most likely to be misrouted due to their mobile nature. The County is satisfied with the performance and advantages of using Verizon in this manner and has no plans to change service providers at this time.

The following diagram depicts the routing used to receive, collect, and forward E9-1-1 calls originating outside of the Verizon network.
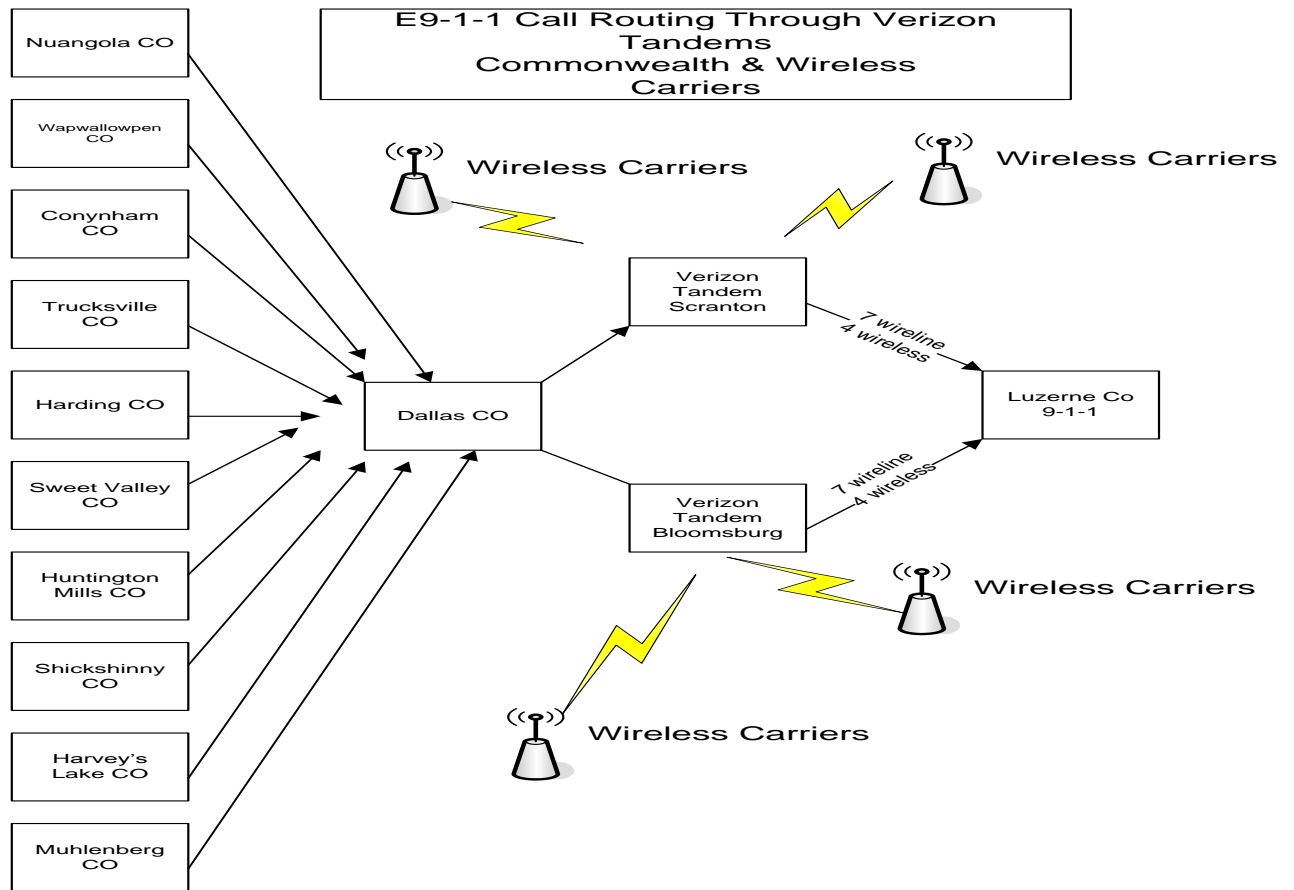
Diagram 1
Call Routing Outside of Verizon Network

4.4   MSAG/ALI

The County houses and maintains its own MSAG and ALI databases to ensure valid caller location information is displayed for emergency calls whenever available. The databases are maintained in redundant Dell Poweredge servers running the Kimball ALI DBMS.- On Verizon National Database now.

The MSAG database ensures all valid addresses, streets, ranges, and emergency service numbers (ESNs), are known to the system. Updates, additions, and deletions are verified and kept up to date by change requests from the telephone company, as well as updates from municipal addressing departments.

The wireline service address locations are also stored in DBMS using redundant database servers. When an emergency call is received, the ECS-1000 queries the onsite ALI database using the ANI provided by the exchange carrier. Caller data including the name, address, firebox, and police zone information is retrieved and is displayed at the proper workstation.

Wireless calls cause the ECS-1000 to request Phase II caller information though DBMS from dedicated providers like Intrado or TCS via redundant 56K data circuits. The location information is determined by various processes used by wireless carriers, and returned to the PSAP through intermediates, the DBMS, and then to the ECS-1000. Wireless location information is finally displayed in a NENA standard format at the appropriate Sentinel workstation. Rebids for updated information during the course of the call are handled in the same manner with the request being routed from Sentinel to ECS-1000, through DBMS to Intrado or TCS and back again. Users at Luzerne County are satisfied with the performance of DBMS at this time.

Future plans call for relocating one of the ALI DBMS servers to the backup site, giving offsite database redundancy and allowing faster response times during disaster operations. We are no longer an on-site ALI database. We are on the Verizon National database.

4.5   COMPUTER AIDED DISPATCH

The County uses Logistic Systems' First Call CAD application to enter, organize, dispatch, and report public safety events. First Call is a GIS-based application utilizing a mapping system to determine locations, analysis, and recommendations. The County uses version 4.2. Logistic Systems plans to release a version 4.3 to upgrade and correct several issues within the next three months.

The County has the CAD, RMS, mapping, and Report Writer modules offered by Logistic Systems. A CLEAN/NCIC interface via an Aether Packet Cluster mobile data switch is installed. However, dispatchers predominantly use Q-Term emulation software version 4.1.40, running on separate Windows 2000 Pro PCs via the PSAP's intranet, because of the greater functionality afforded. Calls are typically received at one of six designated call-taker positions and then entered into a First Call for service (CFS) form. Depending on the nature of the call, a police and/or fire dispatcher receives a copy of the CFS and dispatches responders using designated protocols via the County's radio network. We upgraded to Tiburon IQ Response CAD system in 2012.

4.5.1   Servers

First Call originally ran from redundant IBM AS400 eServers using the AIX operating system. To make support easier, the County removed the eServers from production and replaced them with three Dell Poweredge 4600s running on the Microsoft Windows Server 2003 operating system. One server is the primary CAD application server; the second provides Logi-Sys' Report Writer RMS and GIS database storage and a backup CAD application function. Server three is the Domain controller to maintain and administer the servers and all CAD workstations. All replaced with CAD upgrade

4.5.2   Workstations

Logistic Systems First Call CAD workstations are also located at all 21 positions. The County uses Dell Precision 340 high-end workstations running Pentium 4 processors and the Windows

2000 Pro operating system. Dispatch CAD positions have two 19-inch LCD flat panels to display call, map, and unit status data, while call-taker positions use one flat panel for CAD since they have no need to monitor unit status list. All replaced.

4.5.3   Records Management System

The County's Logi-Sys CAD application has a basic RMS function included with the system. RMS is a useful tool that stores, manages and presents data to aid managers in making more accurate decisions. However, interviews revealed that County personnel and service providers are not using the RMS functionality at the present time. County administrators would like to include RMS operations as part of the larger field reporting and secure access VPN project. Logisys CAD is not an RMS package. Luzerne County crime committee is working on an RMS system. Not implemented.

4.5.4   Mobile Data

The County does not use the Logi-Sys First Report mobile data capability of CAD. There are plans to offer mobile CAD data availability to service providers after the VPN project is completed. The center's staff plan to use the secure access offered by VPN, allowing the use of commercial wireless connectivity with field units wishing to use the feature. Law enforcement agencies are also interested in J-Net access via this method to enhance statewide data access for mobile operations. The county does not have first report. We would need to purchase this. Tiburon CAD system has a functioning Mobile CAD system and capabilities.

4.5.5   Mapping

The GIS mapping database resides on Server 2. As configured today, First Call is using three GIS map layers in CAD:

- Road centerline
- Rail
- Water

PEMA requires seven specific layers for Phase II compliance, and the County plans to add them as soon as possible. Logistic Systems is responsible for maintaining the GIS database at this time; however, there are plans to acquire ESRI's Arc Spatial Database Engine (SDE), allowing the County to perform their GIS maintenance in-house. After SDE is installed, County personnel will be free to add, modify, and maintain map layers as they see fit.

In approximately six to eight months, the 9-1-1 center also plans to provide a backup storage point for the County's GIS department database. This project is contingent upon another project placing a high-speed microwave link to the EOC facility housing the EMA offices and backup PSAP. This project is subsequently dependant on another project to raise the EMA radio tower, allowing a microwave shot directly to the PSAP. Link has been installed via 100Mbps fibre from EMA to 9-1-1 eliminating the need for microwave. In process. Fully converted and utilizing GIS technology.

4.6   RADIO

The Luzerne County radio system uses a mixture of low-band, high-band, and 800-MHz conventional systems. Transmit sites are linked via private microwave to a total of 18 radio sites, 12 towers, two high-rises, and four auxiliary receivers. Transmitters are Motorola Quantars, and the links use Harris Aurora 5800 microwave transmitters. Major tower sites have propane backup generators. Propane tanks are maintained and are rotated by County support staff members from a central storage at the 9-1-1 center.

Interviews indicate vandalism has been a problem at the Campbell's Ledge tower site. Because the space at this site is leased, future plans include finalizing land acquisition and construction on a site that is under County ownership and control.

The County plans to upgrade their microwave capacity to allow better channel control and remote monitoring capability. Remote monitoring will help expedite any service required at their sites and improve overall radio network reliability. Upgrades completed to the Zetron ACOMM radio system.

4.6.1   Radio Consoles

Luzerne County has radio consoles installed at 14 of their 21 positions. The remaining seven call-taker positions have no need for radio capability. The radio consoles were recently upgraded from Orbacom TDM-150 consoles to new PC-based Zetron units. The newer radio consoles are Zetron Integrator Model 4048CCU with Integrator RD software. The County replaced all Orbacom radio consoles, except one at the Supervisor's position, where the original unit was retained for a small measure of redundancy in case the Zetron system would fail. Removed and no longer used.

4.6.2   Paging

Dispatchers use the Zetron consoles for paging via the County's radio network and are generally satisfied with the performance and capability of the system. The Logi-Sys First Call upgrade to version 4.3 allows paging via CAD interface, and users are interested in exploring the options this might offer. The upgrade is scheduled for release within the next three months, by the end of FY 2006. Utilize Zetron ACOMM system for paging with Tiburon CAD system.

4.7   EQUIPMENT ROOM

The County maintains a large equipment room located to the rear of the PSAP. This room houses all the automated systems used by 9-1-1 dispatchers and support staff. In addition, it houses the HVAC, FM200 fire suppression, UPS, and broadband cable and fiber DMARCs used by Verizon for E9-1-1 and administrative calls.

Digital systems, telephony, network infrastructure, and the racks used to contain these systems are generally located at one end of the room, while the HVAC, FM200, transformers, and UPS battery banks are located at the other end. Automated system equipment is located within two rows of shelving and racks. The entire room has a halo grounding cable running around its circumference. The facility is described in more detail in the facility section of this report.

4.8   SUPPORT AND MAINTENANCE

As noted in the facility/infrastructure section of this report, the Luzerne County administrative staff traditionally handles nearly all of the center's support and warranty work. Although this practice has undoubtedly saved the County a great deal of expenses on support/maintenance contracts over the years, this practice highlights a vulnerability to the County. Any personal misfortune, reduction in force or personnel issue, or combination thereof, could have serious consequences for emergency operations in the PSAP.

4.9   FUTURE PROJECTS

As noted previously, the administrative and support staff in Luzerne County has taken on a great deal of technical work not usually assigned in a typical county PSAP. Interviews with staff note a multitude of projects either underway, planned, or contemplated. Most projects are technical in nature and none is without merit. The following list describes the projects and gives a short description where appropriate.

- **CAD**: The County intends to update to the newest CAD release, version 4.2 to version 4.3, when it becomes available, reportedly before the end of 2006. Upgraded/replaced with Tiburon CAD

Application Cohabitation: The dispatchers have a great deal of PC hardware installed at their workstations, Logi-Sys CAD, Zetron radio, CML, and County intranet, making flat panel/keyboard layouts, computer positioning, and data and power cabling within the Centracom consoles problematic. Interviews reveal the support staff is experimenting with cohabitating all applications onto one PC. Consoles have been replaced. Computers remain separate at this time.

Note that this initiative is only possible because the County's self-supporting business model circumvents the typical vendor objections to supporting 'foreign' applications in their PCs. If successful, this will reduce the physical complexity for cabling and power supply while increasing the available workspace for dispatchers. Due to XP and vista issues we have not pursued this option. Replaced

- **Mapping**: The County plans to purchase ESRI's Arc SDE allowing their database staff to perform GIS map updates. The project should allow for faster creation and greater control of desired updates to the GIS database. In progress. 2 high end SDE servers being installed at this time. Completed.

- **CML**: The County has the most recent software release, version 5.2, for their CML ECS-1000 ANI/ALI controller. Upgraded to Cassidian Patriot/Sentinel System in 2012.

- **VPN**: VPN is designed to allow secure access to network resources in the PSAP. The project encompasses a secure server and network routing components that would allow remote users to update or view reports, send CAD data to mobile units and allow J-Net access for law enforcement agencies through the PSAP, thereby improving overall agency effectiveness. Completed.

- **Radio**: The County's radio system is also self-engineered and supported in-house. County staff continually seeks ways to fine-tune this network for better performance and functionality for all users. To that end, there are several upgrades either planned or desired. Several upgrade projects are dependant on radio system upgrades in an interdependent fashion. Completed upgrade to ACOMM

- **Towers**: Several tower sites need to be upgraded or raised to acquire the desired enhancements. The tower at Campbell's Ledge is leased and has had vandalism problems. Management would like to acquire a better, more private location. A 60-foot tall temporary tower covering the southern portion of the County needs to be replaced with a taller, permanent structure.

- **EOC**: The EOC tower site must be raised to allow a high capacity microwave link to the PSAP. This would enable dynamic updates to the redundant automated systems, such as ALI, GIS, and CAD databases in the backup site and help ensure that backup operations are using the most current data possible Not necessary with 100Mbps link install. System traffic will be migrated over to this link. Complete

- **Monitoring**: The microwave system is slated to receive upgrades that would allow sufficient bandwidth for the County to monitor conditions at their remote sites. This capability would allow support staff to respond to problems quickly thereby improving overall reliability of the operation. Reviewing options and getting quotes.

- **Furniture**: The County plans to replace the now obsolete Centracom II consoles with modern, ergonomic 9-1-1 specific furniture. Newer furniture will also allow placement of a mapping monitor for Phase II operations. Completed.

- **HVAC**: The County would like to replace the HVAC system in the PSAP due to myriad problems with the present system. There have been problems with drafts, low humidity, and uneven temperature control within the PSAP since it was opened in 1998. The equipment installed in response to the humidity problem is improperly located within the equipment room. HVAC system replaced

- **Backup Site**: As discussed in Section 3.5, the County plans to establish a full-featured backup site in the EOC, near the County's jail complex. A functioning backup site is a

critical component of emergency services, particularly when the primary has vulnerabilities.

Currently, the backup site is capable of providing limited functionality if activated for disaster operations. Several projects are intended to enhance the capability of the backup site and must be given high priority. Best practices dictate that 9-1-1 operations have a working disaster plan in place.

The backup site's functionality is dependant on a high capacity microwave link to the PSAP so automated systems and telephony can be connected between the two sites. The backup site would also afford redundancy to the systems by allowing offsite backups to be made in real time for the CAD, RMS, GIS, and administrative databases.

4.10   RECOMMENDATIONS

Luzerne County's automated systems use proven, industry standard products and applications to help dispatchers deliver public safety services quickly and reliably. Most systems are set up in a robust and redundant manner to help maintain reliability, efficiency, and continuity of service to citizens and visitors. In addition to the apparent strengths of the automated systems already in place, County emergency support staff has a great deal of projects envisioned or already underway to further improve the operation.

Kimball makes the following recommendations for future enhancement of the agency:

- The County should immediately evaluate the entire HVAC system for suitability in a 24/7 communications center. Interviews noted the air quality and drafts were a source of major concern for line and administrative personnel. Additional testing would be beneficial. Complete

- The County should install the next point release of First Call CAD to correct several small issues and allow paging through the CAD interface. Automating this function allows dispatchers to narrow their focus on operations and reduce errors. Replaced with Tiburon CAD system in 2012.

- The CML ECS-1000 should be kept up-to-date on software releases that will improve the efficiency required in Luzerne County's operational model. Service contract pricing being evaluated. Replaced with Sentinel Patriot system in 2012.

- The County must also assess CML's roadmap for keeping the ECS-1000 compatible with Next Generation E9-1-1. At the present time, Plant equipment can already be outfitted with IP gateways to enable this functionality. Interviews with Plant reveal that CML will release these devices in the near future. A cost analysis of the benefit derived from the gateway equipment versus an all-new Next Generation dedicated controller should be performed when appropriate. The roadmap of Verizon's network upgrades must also be considered so that compatible equipment is always available for use. Agreed. Replaced with Sentinel Patriot system in 2012.

- Sentinel workstations must be kept up-to-date to gain the most functionality and reliability offered with the application. The workstations are up-to-date at the time of Kimball's visit; however, the pace of change is expected to increase in the near future. Agreed. Replaced with Sentinel Patriot system in 2012.

- The RMS system should be enabled and used so that RMS data and field reporting can be commenced as soon as possible. Both County management and field service providers will benefit from the direct and customized access to critical data to aid their planning process. RMS system being handled external t 9-1-1. Once decided, 9-1-1 will need to have capability to interface with any RMS system. Completed with CAD upgrade

- The VPN network should be finished, allowing mobile operations as an option for field units. Field reporting and remote access to data should be implemented allowing the field to enter and access CAD data. This will in turn reduce inbound requests for information and ultimately the dispatchers' workload. Completed and installed and functioning. PD's using currently for J-NET access county wide including MDT's.

- Dispatcher workload and airtime would be reduced through a proper implementation of RMS, Mobile CAD, and wide area network access for law enforcement agencies. Field service providers would have quick access to archived and statistical data allowing better planning capability and giving them a more personal stake in the County's operation. Agreed. In process.

- Law enforcement agencies could have wider access to large information databases like NCIC or J-Net to aid investigations. Media sources could be given access to pre-defined information allowing them to receive and disseminate accurate information on public safety events in real time. J-NET is functioning and in use by field agencies. Agreed. In process

5. OPERATIONS ASSESSMENT AND ANALYSIS

5.1 SCOPE OF WORK AND ASSESSMENT METHODOLOGY

The scope of work related to operations assessment included a review of management practices, organizational structure, call processing methods, a staffing analysis, and a policy review. The assessment criteria are based upon industry standards and best practices and Kimball staff experience. The methodologies used to perform the assessment included multiple employee interviews and field observations to ensure the accuracy of the data collected, as well as the review of pertinent documents.

5.1.1 Observation/Site Visit Methodology

Observation of PSAP operations was performed on all shifts. The observation time was optimized by the team's use of informal discussions with on-duty staff while noting call processing. While explaining PSAP-specific procedures, telecommunicators often shared issues affecting them, such as the need for CAD and addressing project completion, elimination of radio bleed over, and human resource concerns.

We observed live call processing (telephone and radio) and the use of the call processing technology. Comparisons were made between "standard" call processing and Luzerne County PSAP-specific call processing.

"Standard" call processing, as a baseline for observation in this assessment, presumed the following general workflow:

- Telephone requests for service (9-1-1 and administrative) are handled by call-takers, who might or might not generate a CAD entry/incident record. The call information/CAD record is then transferred to a radio dispatcher.
- Dispatchers who generate a CAD entry/incident record or append one generated by a call-taker handle requests for radio service (from call-takers and field units). Incident events are recorded until event end.
- PSAP operational procedures include the following components to call processing:
  o Dispatchers can handle telephone requests for service when busy call-takers cannot respond to the volume of incoming calls.
  o Call-takers and dispatchers can respond to and process requests for database/records searches that would typically be done by the dedicated NCIC operator.

5.1.2 Interview Methodology

One of the key aspects of the assessment is the interview. The interview provides an opportunity to communicate with the various stakeholders, key staff, and technical support resources that the PSAP depends upon to provide emergency communications services. During each interview, Kimball gave an overview of the project, expressed the confidentiality of each participant's

conversation, and asked that the participant discuss issues and experiences related to the center. The PSAP staff and stakeholders spoke candidly, adding great value to this assessment tool.

A set of interview questions was created to initiate conversation. The questions established take-off points from which conversation was started, allowing information to flow freely outside the constraints of a formal questionnaire to the level of comfort each interviewee had with the interviewers.

5.1.3   Documentation Review

Throughout the course of the assessment, PSAP staff provided various documentation and reports for review. These documents included:

Collective Bargaining Agreement	Shift Work Schedule
Policy Manual	Telecommunicator Position Description
Organizational Chart	Supervisor Position Description
PEMA 9-1-1 Plan	Budgets, FY 2003-2005
Training Outline	PSAP Floor Plan

5.2   FINDINGS

5.2.1   Observations

During the site visits to the PSAP, the following observations were noted:

- Luzerne County PSAP call processing is similar to the above-noted standard call processing in all but one aspect; Monday through Friday there is a SCOPE operator on first shift.
- There were typically three call-takers on duty on each shift. This did not appear to be sufficient. It was observed that when one call-taker was on break or unavailable, and when call volume was high, the supervisor and dispatchers had to answer incoming telephone calls.
- All positions were equipped identically based on each responsibility, call-taking, and dispatch. This is an efficient design.
- Each position appeared to have individual or shared resources at hand.
- The PSAP floor is an open room, creating a noisy environment.
- A majority of telecommunicators wore casual clothing. There was no uniform or PSAP shirt. Some telecommunicators wore less than business casual, wearing T-shirts, sneakers, jeans, baseball-type caps, and shirts not tucked in. Others wore EMS uniforms or other public safety agency shirts and jackets.
- Most telecommunicators and supervisors want to perform their responsibilities well, want to stay as long-term employees, and/or advance within the organization. They want to be recognized and respected for the work they do.
- Training and quality assurance programs are well established.

- The process of handling all incoming requests for service, telephone and radio, is efficient. There are function-specific positions for call-taking, police radio dispatch, fire radio dispatch, and supervision. However, the ability to efficiently service these calls is impacted by insufficient staffing. A practice observed repeatedly was for supervisors and dispatchers to assist in answering calls. While this assists in answering calls in a timely manner, it diverts these employees from their regular duties, which can be critical during a time of heavy call volume, radio traffic, and major incidents.

- The 8-hour shift worked by all PSAP floor personnel is the schedule of management's choice. However, there are currently an insufficient number of full-time telecommunicators to realize the benefits of this schedule. Accordingly, overtime expense is affected. Some telecommunicators expressed an interest in rotating shifts and/or days off.

- For a newly hired employee to be trained completely, the training process can be up to four months. Training is provided as six weeks classroom, followed by eight weeks on the floor. The floor training requires a senior telecommunicator to focus on training this new employee, rather than on normal duties.

5.2.2 Interviews with Staff and Stakeholders

The interview process resulted in the identification of recurring themes in factors impacting operations. In total, 15 PSAP supervisors and telecommunicators were interviewed. Additionally, the interviews afforded the opportunity to meet with PSAP management and key County stakeholders, including:

- Chief County Clerk
- Director of Public Safety
- Deputy Director/Technical Support Manager
- PSAP Manager
- Deputy Coordinator of EMA
- Data Manager/Technical Support Supervisor
- Technical Support Supervisor
- Training Supervisor

Interview questions for PSAP management and supervisors included:

- What are the PSAP's strengths? What are its weaknesses?
- In relation to operational practices, what would you like to have or do that you do not have or do now?
- Is annual overtime expense/sick time expense typically more than was budgeted?
- Do you believe the amount of overtime in the past 12 months has had a negative impact on staff?
- Describe any staffing challenges.

From the interviews, the following themes emerged:

- Communication between the PSAP and the agencies it serves could be improved.
- Each responder agency requires its own dispatch protocols resulting in over 73 different agency protocols.
- Employee morale could be improved.
- In general, performance by the Telecommunicators is good.
- Call answering goal is 90/10, and it is achieved. This is 90 percent of all calls answered in 10 seconds or less.
- PSAP training curriculum meets all State-mandated training requirements.
- Twelve telecommunicators minimum per shift is sufficient for the call volume and the services provided.
- Overtime and sick leave use are typically more than what was budgeted.

Interview questions for telecommunicators included:

- Do you believe that the staffing level is sufficient for the call volume and services you provide?
- What needs to be changed to make call processing more efficient?
- Do you believe the amount of overtime in the past 12 months has had a negative impact on staff?
- What training/certifications do you want that you do not currently have?

From the interviews, the following themes emerged:

- Employees were split in their opinion as to whether the staffing level was sufficient.
- There needs to be standardization of call handling practices and protocols.
- Training needs to be more practical, less book learning.
- Continuing education/refresher training needs to be established.
- Formal training officer positions need to be created. These positions will resolve the difficulties created when new employees are seated with a senior telecommunicator who does not want to participate in training. The training positions also create a career path for interested personnel.
- Employees were split in their opinion as to whether overtime during the past 12 months had a negative impact.
- Many want to see a change in the work schedule to allow more opportunity for weekends off.

5.2.3   Call Statistics

The following data and ensuing calculations reflect only incoming call volume of 9-1-1 and published non-emergency lines because that data is the basis for telecommunications industry

accepted staffing formulas. Based on data provided by the PSAP, in calendar year 2005, 368,082 total calls were processed.

This call volume includes the different call types as follows:

Annual Incoming Call Volume – 2005

Call Type	Number of Calls	% of Total Call Volume
9-1-1 wireless	64,549	17.54
9-1-1 landline	236,854	64.35
Total 9-1-1	**301,403**	**82**
Other[1]	66,679	18.11
TOTAL	**368,082**	**100**

[1] "Other" call types are those administrative line calls, emergency or non-emergency.

5.2.4   Call Ring Times

The standard recommended by both NENA and APCO is that 90 percent of all 9-1-1 calls be answered within 10 seconds of presentation to the PSAP.

This is a critical goal. With current telephone networks, there is an average 5 to 10 second call setup time before the call presents itself at the PSAP and begins ringing at a position. Because of this setup time during which the caller is hearing ringing, the average call is actually answered within approximately 20 seconds from the time the caller dials 9-1-1. Any delay in answering calls greatly impacts service to the caller and potentially impacts field unit response times.

Luzerne County management reported that the majority of calls are answered within 10 seconds. However, the assumption is that this goal is met, at times, with the assistance of supervisors and dispatchers answering calls during peak periods.

5.3   ORGANIZATION AND STAFFING

5.3.1   General

As noted in the table below, the PSAP has an authorized staff of 72 operations floor personnel. In addition, there are six management and non-operations positions. These management positions having direct influence and authority over PSAP operations are Director of Public Safety, Deputy Director, PSAP Manager, Lead Supervisor, Training Supervisor, and QA Supervisor. See the following organization chart.

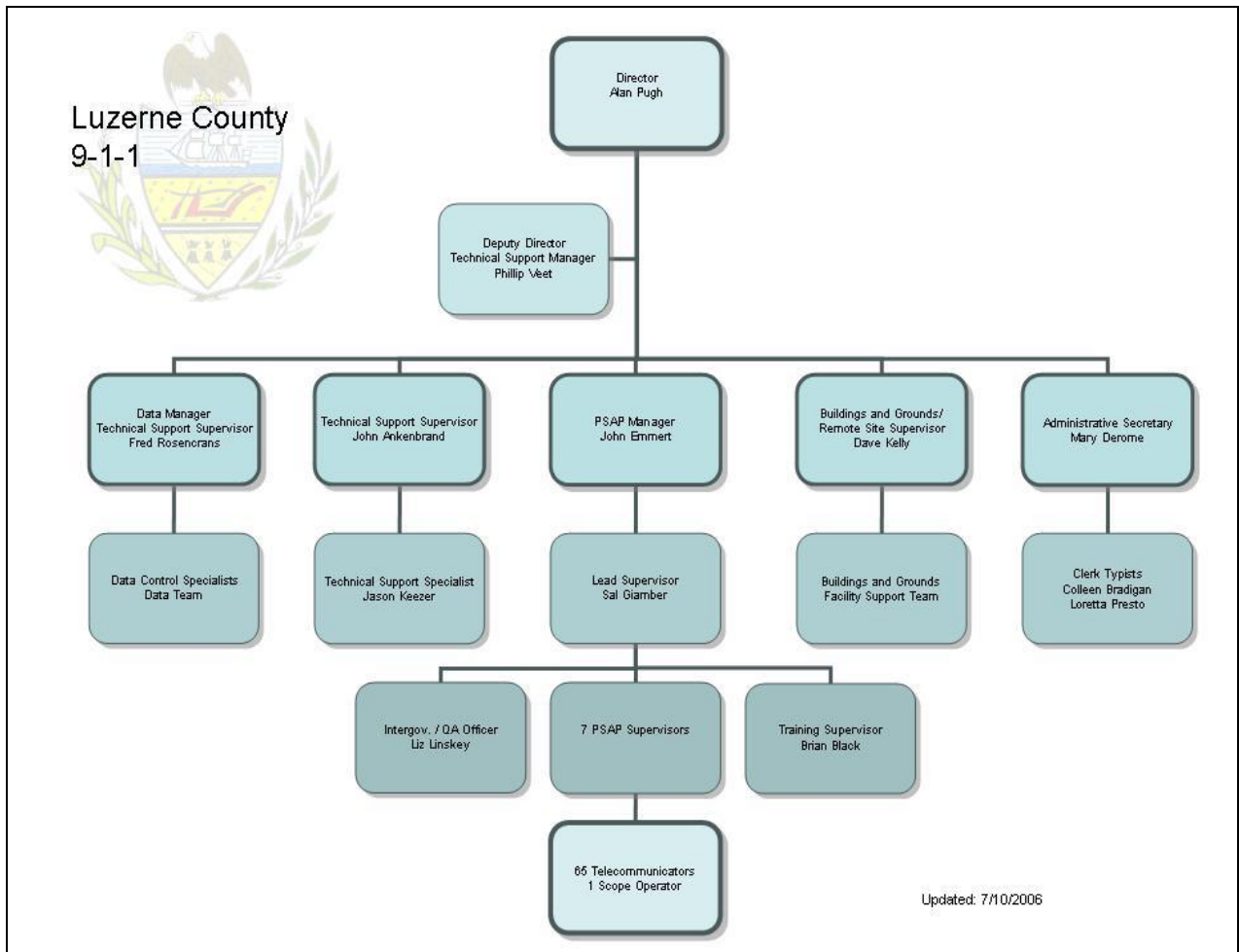| Position/Title	Quantity
Management/Non-operations	6
Shift Supervisor	6
Telecommunicator (Full Time)	65
TOTAL	**77**

Diagram 2
Organizational Chart

At the time of the assessment, four new telecommunicators were in training to fill open telecommunicator positions among the three shifts.

The following position descriptions are indicative of personnel placement and responsibility in the PSAP:

Call-taker: An operations position whose primary function is to answer and process calls for service, both emergency and non-emergency.

Dispatcher: An operations position whose only function should be to dispatch calls for service to field units and monitor and direct field operations. Personnel in these positions should not be expected to answer incoming telephone calls due to field personnel safety issues.

SCOPE Operator: An operations position whose function is to enter and maintain records and contact with various local, state, and national databases, regarding wanted persons, stolen property, and operational notifications.

Shift Supervisor: An operations position whose function is overall responsibility for all operations and personnel assigned to a shift. These include PSAP operations supervision, staff performance, staff training coordination, scheduling, and assistance to call-takers and dispatchers as required.

5.3.2   Typical Operations Staffing

The PSAP operational staff is organized into three shifts of eight hours each to provide 24/7 staffing of its operations. The telecommunicators rotate through the primary operations positions (call-taker, police dispatch, and fire dispatch). Generally, each shift maintains a minimum of 12 telecommunicators and one supervisor.

The COLLECTIVE BARGAINING AGREEMENT BETWEEN AFSCME, AFL-CIO, DISTRICT COUNCIL 87 AND LUZERNE COUNTY, January 1, 2004 to December 31, 2008, states:

"In seven (7) day operations the normal work week shall consist of an 8 or 12 hour consecutive shift, whichever is being used at the time."

"The regular work week for employees of 9-1-1 and Road and Bridge and Moon Lake Park Security shall consist of forty (40) hours per week."

"Management reserves the right to make schedule changes as necessary for valid reasons. Valid reasons may include, but are not limited to, balance of shift strengths, personnel issues, and employee resignations. In the event that management needs to make schedule adjustments, the adjustment may remain in place until the next year's schedule takes effect. Management still retains the right to make adjustments to the newly bidded [sic] schedule if necessary."

The LUZERNE COUNTY 911 STANDARD OPERATING GUIDELINES states:

"Luzerne County 9-1-1 Telecommunicators are expected to be at their consoles and available at the scheduled start of their shift. Shift starting and ending times are as follows:

First Shift: 0730-1530

Second Shift: 1530-2330

Third Shift: 2330-0730"

5.3.3   Retention of Telecommunicators

The attrition rate is estimated to average 8.3 percent. Nationally, the attrition rate is estimated to average 17 percent. The Northeast region, which includes Pennsylvania, has an estimated rate of

18 percent.[1] Although the PSAP attrition rate is less than half of the national rate, management's efforts to fill all authorized positions must continue.

Turnover can be a serious problem and keeps a PSAP in a constant initial training mode, wherein continuing education and career development training is virtually impossible. Working below appropriate staffing levels is detrimental to morale and increases the risk of further vacancies and telecommunicator errors.

5.4 RECOMMENDATIONS

Based on the findings and observations collected in the survey, the following recommendations address four specific areas:

- PSAP staffing requirements, including minimum staff per shift
- Career path planning
- Personnel management

5.4.1 PSAP Staffing Requirements

Although calls for service are generally answered in a timely manner, based on State requirements and the average hourly calls received, the current level of on duty staff is insufficient. The primary reason calls for service are usually answered in a timely manner is that dispatchers and the supervisor have assisted call-takers when call volume is high. While this practice allows the calls to be answered, it takes the dispatchers and supervisors away from their other critical duties, which should be viewed as undesirable. Calls requiring emergency medical dispatch (EMD) exacerbate the situation.

Because distractions can impact on the safety of field personnel the accurate relaying of call information, dispatchers should only concentrate on the field units and coordination of responses. Additionally, supervisors may not always be available to assist the call-takers due to other duties they have, such as notifications, press inquires, or personnel matters. While the current practice of using dispatchers and supervisors as supplemental to call-takers has helped, it should be addressed by adding staff. All telecommunicators and supervisors should be dedicated to their assigned tasks.

Adding to the number of full-time employees to provide the level of service desired by County stakeholders will be costly. However, addressing current and future emergency communications staffing needs is one of the more important public safety investments the County must consider.

When determining staffing needs in an emergency communications center, many factors must be considered, including operations functions, call volume, and budget. Often overlooked is the fact that, unlike every other link in the public safety chain (communications, law enforcement, fire service, emergency medical services, and emergency management); emergency communications

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[1] APCO Project RETAINS, project summary PowerPoint presentation, August 11, 2004.

does not have the benefit of mutual aid to supplement its resources when most needed. And, as much as emergency communications must prepare for worst case scenarios, it is often not practical or fiscally responsible to staff to such high levels. As a result, the balance of all factors is often less than desirable.

In the area of radio dispatching, the Federal Communications Commission (FCC) has a channel loading guideline that states if a radio channel is carrying radio traffic on the average more than 30 percent of the time, or has 50 or more radio units assigned to it, it is overloaded and a second channel is recommended to alleviate congestion[2]. This guideline can also be applied to the radio dispatcher, as the dispatcher is now responsible for monitoring/controlling a second radio channel. Accordingly, a reasonable assumption can be made that if a radio dispatcher is busy greater than 30 percent of the time on the radio, the person should not be considered as a primary call-taker. A radio dispatcher in this situation should not be assisting in the answering of incoming calls due to field personnel safety considerations. This person's full-time attention must be dedicated to the radio.

In the area of supervision, it is widely acknowledged that a supervisor can only directly supervise a finite number of subordinates effectively. This concept is known as span of control.[3] In a public safety environment, this number is relatively small, in the range of three to six direct subordinates per supervisor. Accordingly, as the number of staff required to properly handle tasks increases, there should be a corresponding increase in supervisory personnel. These positions may take the form of assistant supervisors that also carry out other duties in the 9-1-1 center, but are available to assist staff and lead supervisors as needed. Additionally, the addition of assistant supervisors to each shift allows the lead supervisor to focus on other duties that may be required, such as human resource issues.

The following staffing recommendations take into consideration projected need, and are based on specific data and certain assumptions, using 2005 call volume data of 368,082 calls as a baseline for comparison. Current staffing includes 65 total telecommunicators; 6 supervisors; and a shift staffing of 12, representing 3 call-takers and 9 dispatchers.

Using the APCO Project RETAINS worksheet for calculating staffing for coverage positions[4], the recommended number of full-time telecommunicators is 67, calculated as shown below:

A. 12 positions × 24 hours per day × 7 days per week × 52 weeks = 110,073 hours per year requiring coverage
B. 1,645 net available work hours per telecommunicator (assuming 2,080 potential work hours less 435 hours of unavailable time for sick leave, vacation, breaks/meal, and personal days)
C. 110,073 ÷ 1,645 = 66.9 (67)

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[2] FCC Regulations, Part 90.313, Channel Loading
[3] Supervision of Police Personnel, Fourth Edition, Nathan F. Iannone
[4] APCO Project RETAINS, August 2005

Analyses of call handling times via industry standard Erlang 'C'[5] calculations and similar formulas modified to more specifically address public safety environments were conducted. In performing these analyses, the following criteria were taken into consideration:

- 42 calls per hour, all types.
- 120 second call duration (90 seconds call processing and 30 seconds call start up/close out).
- An average delay of 9 seconds.

The result of the Erlang 'C' calculation is that four call-takers are needed per shift, based upon the 2005 baseline call volume. With the requisite relief factor[6] of 1.7 applied, the total number of call-takers recommended per shift is 6.8 (7). To effectively fulfill the mission of the County 9-1-1 PSAP, the following recommendations are made for full-time staff.

First, consider the addition of an assistant supervisor position to accomplish two goals; one, provide needed assistance to supervisors and two, create a step in the career path for floor personnel. The addition of assistant supervisor positions can be done through the promotion of existing staff or by the hiring of new employees.

Full-time Telecommunicator Staffing Recommendations : Per Shift

Position/Function	Existing	Recommended	Net Change
Call-taker	3	7	+4
Dispatcher	9	9	0
TOTAL Telecommunicators	12	16	+4
Assistant Supervisor	0	1	+1
TOTAL STAFF/SHIFT	12	17	+5

The net change in overall staffing as indicated in the table would be approximately 16 call-takers and four assistant supervisors, if new employees are hired for the assistant supervisor positions. Staffing calculations include consideration of a sufficient number of employees on each shift to allow for employee leave, training, and coverage of the supervisor's position by an assistant supervisor.

The recommendations assume a uniform distribution of staff among all three 8-hour shifts and do not take into account shift-specific staff placement based on call volume and functions or the consideration of a power shift. The recommended staffing numbers incorporate the desires of the stakeholders to enhance the level of service to the public and field units, and to prepare for long

[5] An Erlang is a telecommunications measurement that describes the total traffic volume of one hour.
[6] The Relief Factor takes into account time off such as breaks, sick leave, vacation, and days off when the position would need to be covered by another employee.

term multi-agency, multi-jurisdiction events, natural or man-made. Since 2006, we have taken on dispatching services for Hazleton PD and Kingston PD.

A common error committed in projecting staffing needs is improper benchmarking against other call center operations. In this scenario, call centers compare themselves to similar sized operations to determine their needs. While this is a valuable comparison, APCO and NENA both note that most, if not all, emergency call center operations in the nation are not adequately staffed. As a result, the benchmark used for comparison and projections is flawed, and produces flawed or inadequate staffing level projections. To most closely determine the true needs of a call center, the level of service that the center would like to provide, rather than its current level, should be used. Additionally, public safety communications should not plan to staff to the "average" workload, but to the "average peak" workload. In this way, staffing plans are made to support the worst case scenario of an incident. If others are similar centers and are possibly understaffed, consider York and Chester counties have 2-3 times the management staff of Luzerne County 9-1-1. They are of similar size and call volume. LC911 is currently working on a comparison study of similar sized PSAP's statewide.

There is a need to increase the number of supervisors on each shift. Currently, with only one supervisor on each shift, the supervisor's ability to properly oversee and supervise staff and operations is often diminished. By adding an assistant supervisor to each shift, the span of control of staff members will be reduced to an acceptable level, which will allow the supervisors to stay on top of day-to-day operations and administrative functions in a more efficient manner.

5.4.2   PSAP Staff Career Path

A major issue in recruiting and retaining quality staff members in the public safety communications industry has always been a lack of a defined career path in which staff could advance. More often than not, individuals "top out" quickly in this field, and have no opportunity for advancement. This often leaves staff frustrated and unfulfilled, causing low morale and higher than normal staff turnover. Even where there are many long-term employees, frustration occurs, and management overlooks undeveloped resources.

As noted previously, interviews and observations pointed to the need for a defined career path for telecommunicators to improve morale, improve employee retention, and improve recruiting of qualified candidates. Although an in-depth job analysis was not performed for these positions, as it is not in the scope of this assessment, the sources used for other aspects of the assessment were sufficient to identify potential positions in a career path. To make a career path plan work, appropriate increases in salary should be tied to the staff member's successful attainment of additional skills. The following steps in a career path are offered for consideration by County stakeholders:

Entry-level Telecommunicator: Responsible for training in call-taking and radio dispatching.

Dedicated Call-taker: Responsible for call-taking duties only. As expressed by some telecommunicators during interviews and experienced by Kimball staff in other PSAPs across the nation, radio dispatching is beyond the capabilities of some employees. To require them to perform in a dispatcher function adds stress, sets them up for failure, increases potential for mistakes and liability, and results in the loss of otherwise exceptional employees.

Call-taking is the first vital step in the emergency communications system. Call-takers perform emergency medical dispatch (EMD) and should perform standard police and fire protocols. This position can afford superior service and adherence to protocol if implemented.

Dispatcher (Police Radio/Fire/EMS Radio): Responsible for the efficient monitoring of radios and transmission of vital information.

Tactical Dispatcher: To be deployed to major incident scenes to coordinate communications specific to that incident, and is based upon the wild-land fire dispatcher position used in many agencies throughout the mid-western and western states. The functional position requires knowledge of the incident command system and inter-agency training.

Certified Training Officer: Trained to assist in the hands-on training of new employees in all aspects of all positions and functions.

Assistant Supervisor: Supplement supervisory staff as needed, with operations functions responsibilities; support appropriate span of control.

Supervisor: Overall operations command (currently in place)

5.4.3   Personnel Management

As noted in this assessment, both management and telecommunicators had expressed the need for improved internal communications, the need to improve morale, and the need to improve the application of rules, policies, and protocols. That both parties agree on the same important issues is critical and should speed resolution of most issues.

Both management and telecommunicators related that management, to assure the two-way sharing of information and airing of concerns, had instituted regular meetings. This is an excellent first step. To maintain the building of relationships, management and employees should act expeditiously to address the issues discussed. Doing so will demonstrate sincerity and good faith by management and staff.

Center administration cannot be expected to manage as the telecommunicators might want and believe they should; however, management should still attempt to communicate what is being done, when, and why, within reason. We do work with dispatchers and have an open door policy with everything, where feasible.

Supervisors must receive appropriate training in resource management and leadership skills, as they are the front line of management and set the stage for how upper management is viewed. The supervisors who were interviewed expressed a need for appropriate training to enhance skills and procedural competency. Additional training is provided and will be expanded.

The quality assurance program (QA) is an excellent method for improving and maintaining communications to the telecommunicators. Good performance should be noticed and appreciation expressed to the staff. Recognizing that what is recognized gets repeated, management must act on reward and recognition. Management and supervisory staff must routinely be present in the

PSAP facility to effectively advance communications with personnel. Funding for industry accepted awards would be a nice incentive. Current tangible awards are paid for by management personally.

Management and telecommunicators must hire, train, and work toward the end that emergency communications is a profession as much as law enforcement and fire service. All actions must support this understanding.

It is management's responsibility to model and enforce its own rules and to do so in a uniform manner. It is management's responsibility to eliminate ambiguity and establish a work environment that is conducive to good behavior and performance. The appropriate application of County, PSAP, and union rules will reap great rewards and provide support to management when corrective discipline is necessary. The additional CALEA policies will aid in eliminating grey areas of the contract and SOP's.

Providing a career path for the telecommunicators, such as the one described above, has value such as responsibility, pay and benefits, and training. It should always be management's practice to hire, train, and promote long-term, successful employees. Agreed

Additional initiatives to sustain good morale include:

- Create a joint management/employee working group, with a limited existence, to aggressively pursue resolution to real and perceived issues. Address each issue and concern with the same high level of importance.
- Publicly reward exceptional performance and behavior.
- Provide positive feedback. Do performance evaluations periodically, not just annually. QA all call types, routinely.

6.   ACCREDITATION READINESS ASSESSMENT

6.1   INTRODUCTION

Included in the RFP released by Luzerne County for a best practices review and analysis of the Luzerne County 9-1-1 Center, was the requirement to conduct an accreditation readiness assessment as a precursor to entering the Public Communications Accreditation Program through the Commission on Accreditation for Law Enforcement Agencies (CALEA). The County seeks validation of progress and identification of outstanding issues to be resolved in preparation for the accreditation program.

Written directives, policy, procedure, and planning documents represent the heart of the CALEA assessment process. Understanding the County's goal, Kimball has given particular attention to the policies and procedures promulgated by the 9-1-1 center. Following determinations of compliance with Commission standards in the directives system, agencies must demonstrate they actually perform their responsibilities consistent with their own directives.

The accreditation readiness assessment process provides a review of the agency policy manual and other directives for compliance with standards promulgated by CALEA for the Public Safety Communications Accreditation Program. By employing experienced, certified, and practicing accreditation assessors, Kimball is in a unique position to provide recommendations for policy development and recommendations for implementation of a process for successfully accomplishing the CALEA accreditation program requirements.

It is important to understand the readiness assessment addresses only the agency's level of compliance with CALEA Standards for Public Safety Communications Agencies. Policies and procedures found in compliance are not further evaluated for operational efficiency and effectiveness. No guarantee is made regarding the agency's eventual success in the CALEA accreditation program, as the readiness assessment does not go beyond evaluating the current state of the agency, providing gap analysis, and recommending actions required for success. Accreditation is in progress.

6.2   BACKGROUND

The Commission on Accreditation for Law Enforcement Agencies (CALEA) was formed in 1979 to establish a body of standards designed to increase law enforcement capabilities to prevent and control crime and increase agency effectiveness and efficiency in the delivery of law enforcement services. CALEA established an accreditation process that provides participating agencies an opportunity to voluntarily demonstrate that they meet an established set of professional standards and receive appropriate recognition.

Accreditation for communications agencies emanates from a partnership formed with APCO in 1996 to develop an accreditation program specifically for public safety communications agencies to promote superior public safety communications services; recognize professional excellence; and not conflict with technical standards established by competent authorities.

The communications accreditation program applies only to public safety communications agencies such as stand-alone public safety communications agencies, the communications component of public safety agencies (i.e., fire, EMS, hospital trauma centers), agencies with public sector communications responsibilities, and the communications component of law enforcement agencies.

The CALEA Public Safety Communications Standards are divided into the following chapters:

Chapter 1, Organization: 34 Standards
Chapter 2, Direction and Authority: 37 Standards
Chapter 3, Human Resources: 38 Standards
Chapter 4, Recruitment & Selection: 31 Standards
Chapter 5, Training: 22 Standards
Chapter 6, Operations: 54 Standards

(Standards for Public Safety Communications Agencies, CALEA ©1999)

The Commission encourages agencies to use the standards as a management tool, guiding policy development and operational management. Once the agency officially enrolls in the program, it will receive the full support and services of the Commission for the duration of the agreement.

6.3   METHODOLOGY

The accreditation readiness assessment for Luzerne County 9-1-1 included detailed reviews of the following documents:

- Agency policy manual;
- County personnel policy;
- County 9-1-1 plan filed with PEMA;
- Collective bargaining agreement between the County and the Association of Federal, State, County, and Municipal Employees (AFSCME) District Council 87; and
- Standards for Public Safety Communications Agencies, issued by CALEA.

Each standard contained in the CALEA manual imposes specific requirements on the agency. For each standard, the agency must have a corresponding directive, procedure, plan, or observable proof of compliance. In performing the accreditation readiness assessment, the agency documentation, facilities, practice, and procedures were compared to the standards; compliance determined; and where practical, recommendations provided to bring the agency into compliance. To perform this task, assessor worksheets were employed to track the review process.

For each standard listed on the worksheets, a notation of the required compliance level is provided {(mandatory/other than mandatory); a determination of compliance status (compliant/noncompliant/not applicable by function)} is provided; and observations, comments, and/or recommendations are provided. By providing significant detail in the worksheets, Kimball

provides guidance to the staff of the Luzerne County 9-1-1 Center for bringing the agency into compliance with all applicable standards. The worksheets are provided with this report as an appendix.

For each of three agency-size categories, CALEA assigns levels of compliance to indicate whether a given standard is mandatory, other than mandatory, or not applicable due to size. Levels of compliance denote the relative importance attributed to each standard, if applicable. Standards dealing with life, health, safety issues, legal matters, or those considered essential are considered mandatory for all agencies. Size is defined as the total number of authorized full-time personnel. Luzerne County 9-1-1 is a Size C agency, meaning it has more than 76 full-time personnel.

A summary of the compliance status of the 216 standards is provided in the assessment section. Accreditation readiness assessment worksheets will be provided to the 9-1-1 center's management staff separately, providing detailed comments and recommendations specific to each standard.

6.4   ASSESSMENT

In considering the level of readiness of the agency for the accreditation process, it is helpful to understand the process itself. Preparation for accreditation officially begins when an agency enrolls in the program with CALEA. The enrollment is a contractual agreement, which requires payment of fees and the completion of the Agency Profile Questionnaire (APQ).

Upon receipt of the APQ, CALEA will send the applicant agency a self-assessment package. The package contains materials to familiarize the accreditation manager with process, terminology, and procedures. Contact with the CALEA program manager is established and dialog between the Commission and the agency regarding various aspects of the program begins. Numerous preparations for program budgeting; involvement of agency personnel; delegation of responsibilities; and the maintenance of accountability, training, and dissemination of program information must be considered.

The agency begins the process of understanding what the requirements for the agency will be and building the administrative infrastructure that becomes the basis for an agency plan to achieve CALEA accreditation.

Upon the creation of an agency plan, the agency begins the self-assessment phase. Self-assessment involves careful scrutiny of the agency's policies, procedures, and facilities, and making a determination regarding its current status in relation to the standards; conducting gap analysis; and taking steps to close the gap.

The self-assessment phase is often the most difficult and time-consuming stage of the process for agencies to complete. New, inexperienced accreditation managers frequently do not understand the requirements and the level of complexity of the program they must address. They are additionally handicapped by other responsibilities that prevent them from maintaining focus and

commitment to the self-assessment. It is in the task of self-assessment that Kimball has provided assistance to Luzerne County 9-1-1.

Significantly, the Director of Luzerne County Emergency Management, Alan Pugh, has expressed his commitment to achieving CALEA accreditation and has demonstrated commitment by the assignment of an accreditation manager, Fred Rosencrans. Mr. Sam Guesto, Chief County Clerk, and the County Commissioners have strongly expressed their support for the CALEA accreditation program and their desire for the 9-1-1 center to complete the program. Although the assignment is part-time, it is apparent the assignment of Mr. Rosencrans has created an expectation and a prioritization that work will be done to ensure completion of the required effort. Full-time assignment of an accreditation manager is often cited as critical; however, comparatively few agencies have the staffing resources to do so. Experience indicates the duration of the effort is extended by part-time assignment, but the objectives have proven achievable.

We note the Luzerne County 9-1-1 Center had not yet officially enrolled in the CALEA program at the time of the review. Significant costs are associated with the enrollment and achieving appropriate justification, and funding alignment has been a complex task. The agency elected to proceed with the readiness assessment to provide a "jump start" to the program implementation.

Despite not being officially enrolled, the center has been able to demonstrate compliance with CALEA standards defined as "mandatory" for 22 percent of the standards, and compliance with 16 percent of "other than mandatory standards." CALEA requires compliance with 100 percent of applicable mandatory standards and 80 percent of applicable other than mandatory standards. The level of compliance already achieved is an excellent example of working ahead toward an important goal. Details regarding the assessment process and findings are provided in Section 6.4 and in the worksheets provided separately to the center's management staff..

The review process conducted by Kimball has identified 14 standards believed to be "not applicable by function (NA)" for Luzerne County 9-1-1. These standards appear not to apply to Luzerne County 9-1-1 because the agency does not perform the related functions. The agency should carefully consider the NA compliance status and confirm the accuracy of this judgment. If the agency subsequently determines the related functions are performed, even if infrequently, the status will change.

Not applicable by function differs from not applicable, as determined by agency size. As a Class C agency, Luzerne must comply with all standards unless they are not applicable by function, unless granted a waiver by the Commission, or unless the standard is one of the 20 percent other than mandatory standards elected by the agency for noncompliance.

Eleven standards are listed as "observable" by CALEA, indicating an observable presence of a specific, required condition or practice satisfies the standard. An example of an observable standard is 6.6.1, requiring 24-hour, two-way radio capability providing continuous communications. Although not all observable standards were in fact viewed by the assessor, the agency accreditation manager indicated compliance with the observable standards while being interviewed during the assessment process and in various data exchanges subsequent to the onsite portion of the assessment.

The following tables provide a summary of the compliance status, determined by the comparison of the agency policy manual, the County personnel manual, the collective bargaining agreement, and the County 9-1-1 Plan with Standards for Public Safety Communications Agencies published by CALEA in January 1999, and updated in November 2003 and July 2004.

Table 1: Compliance with Mandatory Standards

Chapter	Total Standards	Mandatory	Compliant	Not Compliant	Not Applicable
1. Organization	34	20	2	18	0
2. Direction/Authority	37	24	2	19	3
3. Human Resources	38	30	8	21	1
4. Recruitment/Selection	31	27	0	24	3
5. Training	22	15	3	10	2
6. Operations	54	43	20	20	3
Total	**216**	**159**	**35**	**112**	**12**

Table 2: Percent Compliance with Mandatory Standards

Chapter	Total Standards	Mandatory	% Compliant	% Not Compliant	% Not Applicable
1. Organization	34	20	10	90	0
2. Direction/Authority	37	24	8	79	13
3. Human Resources	38	30	27	70	3
4. Recruitment/Selection	31	27	0	100	11
5. Training	22	15	20	67	13
6. Operations	54	43	47	47	7
Total	**216**	**159**	**22%**	**70%**	**8%**

Table 3: Compliance with Other than Mandatory Standards

Chapter	Total Standards	Other than Mandatory	Compliant	Not Compliant	Not Applicable
1. Organization	34	14	0	14	0
2. Direction/Authority	37	13	0	13	0
3. Human Resources	38	8	2	5	1
4. Recruitment/Selection	31	4	3	1	0
5. Training	22	7	1	6	0
6. Operations	54	11	3	7	1
Total	**216**	**57**	**9**	**46**	**2**

Table 4: Percent Compliance with Other than Mandatory Standards

Chapter	Total Standards	Other than Mandatory	% Compliant	% Not Compliant	% Not Applicable
1. Organization	34	14	0	100	0
2. Direction/Authority	37	13	0	100	0
3. Human Resources	38	8	25	63	12
4. Recruitment/Selection	31	4	75	25	0
5. Training	22	7	14	86	0
6. Operations	54	11	27	64	9
Total	**216**	**57**	**16%**	**81%**	**3%**

6.5 CONCLUSIONS

Normally, agencies require several years of preparation to be ready for the rigorous CALEA onsite assessment process. The creation of an agency policy manual and the designation of an accreditation manager are two important and significant steps in initiating the task of achieving accreditation by CALEA. The accreditation readiness assessment performed in this project is another progressive effort that will facilitate the accreditation project.

This accreditation readiness assessment has been conducted to assist the administration of Luzerne County 9-1-1 identify the areas of strength and the areas requiring focused effort to facilitate the timely completion of their accreditation project. It is a significant "step-up" to the self-assessment phase of the accreditation process.

Self-assessment provides an opportunity for the agency to conduct a thorough analysis of its activity to determine whether they meet the requirements of the standards. The systematic review of each chapter, subchapter, and standard in the Standards manual reveals the extent the agency

meets or exceeds the requirements applying to the agency. Self-assessment also reveals the areas the agency does not meet the requirements of the standards, identifying what must be done to achieve and document compliance. (CALEA Self Assessment Manual, pages 2-3).

The readiness assessment provides the guidance to achieve compliance by completing the analysis, identifying the areas requiring additional effort, and making recommendations to resolve the deficiencies.

The Commission identifies 23 steps to initial accreditation. The steps reflect the process from an initial request by an agency through the presentation of the accreditation certificate to the agency by CALEA.

Many of the 23 steps are administrative in nature and document the effort for the Commission and the agency. The steps are described in detail beginning on pages 2-7 of the Accreditation Process book. Data is exchanged between the agency and CALEA, and determinations are made regarding eligibility, agency class size, standards' applicability, and any requested waivers.

Although logic may suggest compliance with standards could/should be inferred from context of existing regulations, the accreditation process does not accept inference for conclusive proof of compliance. Directives must state the required policy/procedure clearly and unequivocally. Where the assessment has identified directives that merely imply compliance, the standard is deemed non-compliant.

The principle procedure by which CALEA conducts a formal onsite assessment is the review of the agency's accreditation files. The files contain completed individual standard status report forms, written directives supporting each standard, documentary proofs of compliance with the agency's directive, and/or other proofs of compliance, such as a listing of observations or interviews. There are specific guidelines for the protocol and formatting of the files that are described in the manuals.

To date, accreditation files have not yet been established in the agency.

There are also specific guidelines for public information plans related to accreditation, tours, panel interviews, and onsite logistics contained in the manuals. The agency must thoroughly review and comply with the CALEA guidelines, and ensure accurate understanding through dialog with the assigned CALEA program manager.

Although significant work remains to complete the above requirements, the process is well documented and reasonably achievable. Having completed the analysis of policy compliance and having received recommendations in this report for policy development and modification, the Luzerne County 9-1-1 is well positioned for program success.

6.6   RECOMMENDATIONS

- The agency accreditation manager should attend a CALEA conference and participate in the numerous training sessions conducted at the conference.

- The agency should become associated with the Public Safety Communications Accreditation Support Network (PSCASN) for networking opportunities, liaison with CALEA, mock assessment assistance, and national meetings. Refer to www.pscasn.net for additional information.

- The agency should become associated with the Pennsylvania Police Accreditation Coalition for networking opportunities, mock assessment assistance, and monthly meetings. Refer to www.papac.org for additional information.

- The agency accreditation manager and other appropriate staff would benefit by visiting an accredited communications agency. The observation of accreditation file structure, organization and protocols provides insights and understanding not otherwise easily obtained. The agency should arrange such a visit at the earliest possible time to ensure good understanding of file structure and formats from the beginning of their program.

- Accreditation files must be established and completed with appropriate documentation.

- The agency should make deliberate determinations concerning the best format and method for issuing a directive, disseminating the directive, maintaining and/or withdrawing the directive, modifying the directive, and referencing the directive.

- Directives can exist in multiple formats. That is, they may be in a standard operating procedures manual, special orders, general orders, operating manuals, memorandums, contracts, or statutes. Even emails may be considered a directive under certain circumstances.

- Some standards with multiple components do not require a "directive" in the policy manual, and can be satisfied with other forms of documentation. For example, community involvement and public education (Standard 2.6 et seq.) could be addressed in a community relations manual that addresses all of the specific components of the Standard.

- In the development of new or revised policy and procedure, the agency should address the most challenging mandatory standards first. Standards relating to safety, health, and risk management should be prioritized. Similarly, other than mandatory standards should be evaluated by the agency to determine where compliance can be achieved and where compliance is most challenging. Identification of the required 80 percent should be done early and assignments for developmental efforts made.

- Files can be enhanced by including an agency and/or County directive and a related section from the collective bargaining agreement if both are clearly on point. PEMA regulations are another good source for acceptable directive proofs of compliance. On balance, only salient documents should be included; avoid overkill or proving the standard "by the pound." It is possible to put too much in the file.

- Directives should contain a policy statement, a section assigning responsibility and accountability, procedural guidelines if appropriate, components required to satisfy the directed action(s), and time requirements if appropriate. Generally, this format supports standards' requirements more effectively than separate directives for policy, procedures, and/or plans because they address each aspect of the requirements in a single document. Separate directives should cross reference.

- Directives can be consolidated to group similar content/functions into one directive, covering a broader range of related requirements. For example, a directive concerning "use, care and maintenance of agency equipment" could include a section for issued

personnel equipment, such as headsets; a section for stored equipment (state of readiness); a section for equipment in general (care, reporting damage, etc.); and a section for responsibilities (who issues, who maintains, who reports what to whom, etc.). By consolidating, one directive satisfies multiple standards and makes it easier for employees and administration to find the appropriate directive references.

- A method for demonstrating the CEO's approval of directives is required. It can be accomplished with a signature block on each directive, or by a signed authorization statement in the introduction/preface section of a manual.

- Conditional standards can be not applicable by function if the agency never performs the affected function. The agency must provide documentation attesting to the fact they never perform a not applicable function.

Although many of the standards found to be not in compliance are other than mandatory, the agency is encouraged to comply with as many as possible. CALEA requires compliance with at least 80 percent of the other than mandatory standards.

- The agency chief executive must ensure a sustained commitment to accreditation as a high priority for the initiative to be successful. The accreditation manager must be given the time and resources to complete the needed tasks. All agency staff should be given familiarization information concerning the effort, the value of the program, and be encouraged to participate and support the program.

- Agency progress must be monitored to ensure required tasks are delegated and performed. Accountability for performance of assignments is important in maintaining focus and progress toward the completion of preparations for the onsite assessment by CALEA representatives.

- Agency employees should be involved in the process, and new/revised policies and procedures should be staffed with personnel to assess feasibility and to gain support.

- Feedback and updates regarding progress toward accreditation should be provided to personnel to encourage participation and sustain interest.

7.   CUSTOMER AGENCIES SURVEY

7.1   METHODOLOGY

The assessment of the Luzerne County 9-1-1 Center included interviews with representatives from agencies that receive their dispatch support from the center. Kimball received two lists of personnel and agencies from the Client representing a police advisory contact list and the Luzerne County 9-1-1 Fire/EMS Advisory Group. Director Pugh also made suggestions for interviewing specific persons from the lists, with the comment that the suggested persons would not hesitate to provide candid responses.

Kimball interviewed nine representatives from the fire/EMS service and nine representatives from police departments, all who routinely interact with the center in the performance of their respective duties. Interviewees were advised Kimball was conducting the interviews as part of an operational assessment of the center. As customers, their comments were important to the process of evaluating the quality of service being provided by the 9-1-1 center. To facilitate candid responses, Kimball advised the subjects no specific comments would be attributed to them.

The interview instrument consisted of seven structured questions and one open-ended question. Demographic data relating to the person/agency being interviewed was recorded prior to beginning the survey questions. Responses to the questions were recorded on a survey form. A sample of the instrument form is provided as Appendix C.

At the completion of all interviews, Kimball reviewed the responses to identify any trends or patterns that would be of interest to the Client. Finally, a sampling of representative comments was selected for inclusion with the report. While anecdotal information is potentially influenced by personal bias, and as a result subject to bias-related inaccuracies, it can be very useful to assess impressions, trends, and areas for improvement.

Original interview response documents have been retained as part of the Kimball project file.

7.2   SURVEY RESULTS

7.2.1   Commonly Expressed Perceptions/Trends
The following points have been identified as commonly held perceptions, in that they were expressed multiple times in the survey process. It is worthy of note that comments ranged from very favorable to unfavorable, but even in unfavorable survey results, respondents expressed an appreciation for the work of the center's personnel, and acknowledge the tasks performed by telecommunicators is challenging.

The below results are presented in no particular order. No judgments are made regarding validity of the perceptions.

- The Advisory Board is not being used to its full ability. Attendance is poor
- Several responses noted there were numerous uncooperative Chiefs [Fire] in the County who were being allowed to impede progress.
- All remarked that the single alerting channel has been successful and increased efficiency. This was met with great resistance when implemented.
- All felt that the radio system worked well except for the talkback channel covering the southern end. (Center staff is aware of the deficiency and are actively working to resolve it.)
- Dispatchers need to enunciate clearly, give full information on initial dispatch, and not drop the carrier after tones for the recording pagers.
- EMS officers request calls be struck out more quickly; some acknowledged paper records add to this but felt CAD should hold special procedures. Addressing and GIS needs to be completed to allow for electronic ESN's.
- Field officers, to a great degree, respect the dispatchers and the job they accomplish under the perceived conditions. The field is cognizant of the limitations imposed by CAD, radio, and staff turnover.
- Field officers feel there is a great deal of professionalism demonstrated by most of the center's staff.
- The field believes that more and better training would help reduce the inconsistencies between individuals in the center. Additional training is always helpful.
- Several responses noted the CAD system did not perform fill-ins or give cross streets. CAD can only display what it receives.
- Many agencies would like to use mobile data and RMS capabilities as soon as possible. Agreed.
- Some dispatchers need to be more attentive to what is going on in the street to ensure appropriate dispatching performance.
- Ride-alongs were good and should be repeated. Both the dispatchers and police officers benefited by gaining insights about the others' needs, responsibilities, and constraints.
- Dispatchers are not sufficiently familiar with the jurisdictions (geography). GIS mapping will help in process. Upgrade in process.
- Continuity of dispatching suffers during fill-in times for breaks, shift changes, etc.

7.2.2   Survey Quotes

As noted above, the survey results are influenced by the personal biases, and consequently, should not be considered completely factual. The quotes presented in this report, while subjective, offer insights to the beliefs held by the customer agencies served by the Luzerne County 9-1-1 Center.

- ”EMS should be dispatched by closest unit, not political boundaries”. State law, not under county control.

- “We [EMS] can hear the police dispatched on a call 2 minutes earlier than us and they received more information. When we ask for more information the dispatcher has to put the channel on hold so they can make the callback.” Some response protocols are by street and address range. Police are by municipality.

- “The 9-1-1 center and us work well together.”

- “The good dispatchers on all shifts are pretty consistent. Better or more training would probably even that out more.”

- “Dispatchers are not familiar with their areas and do not use the notebook records they have been given.”

- “Dispatchers do a good job considering the flak they get from some of the knucklehead Chiefs we have.”

- “My department would be very, very interested in using mobile data.”

- “The 9-1-1 center is doing a commendable job and overcome many problems to deliver.”

- “We need cross streets on first dispatch, both if they are available.”

- “9-1-1 has had a lot of growing pains but gives good service in spite of them.”

- “The department numbering system is redundant which leads to on scene units having the same designation.”Numbering system was devised by the field units advisory board.

- “There is too much churn with projects and procedures.” This can be reduced by additional staffing or contracting out services.

- “The training needs higher standards set.”

- “The repeater system is very well thought out.”

- “There are no problems with Alan Pugh’s people. It is running smooth under Alan.”

- “[Dispatchers are] sometimes difficult to deal with. They don’t always seem to be aware of what is going on with officers on the road.” Dispatchers handle on average 1,000 plus calls a day. Sometimes they are busy just as the field units get busy.

- "Many times we go through multiple dispatchers during a shift who may not know who's busy, who's available, or what situations we are dealing with, which require us to use more air time needlessly." They get breaks and lunch

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8.   CLOSING COMMENTS

Operating an emergency communications center is a daunting task even under ideal conditions. The Luzerne County 9-1-1 Center is performing its mission, getting the job done, in spite of obstacles that must be overcome or worked around on a daily basis. Many obstacles emanate from the simple fact that establishing a public safety answering point is a complex task, requiring significant expertise in organizational behavior and management and a variety of technologies. It is resource intensive in terms of funding, time, training, and personnel.

Establishing the 9-1-1 center changed the way many County public safety organizations do business. Some personnel within the affected agencies have not embraced the changes. The center provides communications services for 214 agencies within Luzerne County, with a range of sizes and call volumes, which encounter every public safety issue possible. Some agencies are paid, full time; some agencies are volunteer; some are a combination. Protocols for dispatching the various agencies are varied. We are seeking a standardized system of dispatching but it is difficult to get 214 agencies and 76 municipalities to agree on a simple standard way.

Public safety communications centers are the critical link between citizens and service providers that respond to the calls for service, and yet telecommunicators operate in the background, virtually out of view. As a profession, public safety communications are known for high stress and high attrition. It is not difficult to understand why.

For these reasons, any assessment of PSAP operations must be balanced, and fully cognizant of the magnitude of the tasks performed.

Luzerne County 9-1-1 Center has successfully addressed many difficulties since inception in 1997. The staff and management continue to approach the mission with positive expectations.

The center's senior management staff has demonstrated initiative and ability in performing the technical tasks associated with operating the center. The management of personnel and other administrative tasking become challenging as they compete for attention with immediate need, must do, operational issues at the center. Management staff is stretched to keep up.

The ensuing effect impacts tasks that are less obvious, or perceived as less pressing. The center administrative staff has realized this reality, and they are making efforts to be more engaged; however, given the ongoing overall requirements of the center, we believe additional resources should be considered for the center.

Options include outsourcing maintenance and support, outsourcing development of new technology, or adding administrative support and specialized personnel management to the agency resources. We agree, but a budget must be created to support this.

APPENDIX A – EXISTING EQUIPMENT ROOM LAYOUT

APPENDIX B – CUSTOMER SURVEY

UNITED STATES
POSTAL SERVICE

October 2004

Municipal Addressing Authority
Township Zoning/Planning Officer
County 911 Coordinator
Architectural and Engineering Firm
Developer
Community Association

To whom it may concern:

The US Postal Service plays an integral part in homeland security issues, in that we maintain the national database of deliverable addresses for the United States. Internet services, credit card companies, utilities and various other entities utilize this information for verification purposes. The information pertinent to all new growth needs to be maintained through direct communication from each township/municipality addressing authority. It is submitted to a centralized department within each Postal District called the Office of Address Management Systems. We need your assistance in obtaining this information as early as possible.

As the township or municipality is undergoing growth or renaming of streets, the zoning and/or planning officer should submit new street names/addresses, by mailing this information to the US Postal Service, Manager, Address Management Systems, Central PA District, 1425 Crooked Hill Road, Harrisburg, PA 17107-9321. This can also be submitted directly by the developer or architectural firm, if you wish them to have USPS approval before they submit the names for final municipality approval. However, if it is submitted by the developer and it is subsequently changed by the municipality, then it would be necessary to ensure that we are notified either by the developer or yourself of any changes.

The request for new street name approvals is to be submitted on official letterhead. It should include the street name, block range and any preliminary addresses already assigned. A map of the development showing the relationship of the new streets to existing streets needs to be attached. All requests for street name approvals (either from the municipality or the developer on behalf of the municipality) should be sent to the District AMS office before they are issued to the property owners by the township/municipality. Once approved, the street name is locked into the database by ZIP Code. This avoids another developer/municipality selecting the same name within a 5 digit ZIP Code or any ZIP Code under the assigned delivery office.

The AMS Manager will respond to you in writing when the street name/addresses have been approved. If there is a conflict, you will be advised as to why there is a conflict and suggested alternatives. Again, if the above is accomplished while in the preliminary stages, conflicts can be identified and addressed prior to the final approval township meeting. The AMS office will also advise the township/municipality or developer which zip code will be servicing the addresses. A copy of the approval letter along with the map is then forwarded to the appropriate Post Office for reference.

Plans should be submitted in their entirety, with updates submitted if new phases are revised later. Additionally, if you are changing street names or numbers from the original plan submitted, the changes need to be put in writing and submitted to the District AMS office.

The municipality has the sole jurisdiction to assign street names and numbers to the property. The Postal Service reviews and approves these street names as valid mailing addresses to avoid

conflicts within a ZIP Code. All new street names, spelling changes, and address number changes need to be accompanied by an official letterhead from the addressing authority, as we will not accept them directly from the customer.

Once the addressing is complete and approved, the developer is then responsible for contacting the appropriate Post Office to meet with the Postmaster, Manager, or other management official to discuss the type of delivery mode and placement of the mailboxes. Again, this should be done very early in the approval process, particularly if cluster box units must be ordered.

The Postal Service is committed to providing the most efficient and economical service possible. Once delivery is properly established, it is the policy of the Postal Service not to alter that service unless it will improve delivery efficiency. In the case of individual homes not built as part of a new development, the new home owner should contact the appropriate Post Office to discuss establishment of delivery.

All of the above requests are done to avoid delay of mail delivery to the customer. If plans, addressing, street name approval, mode of delivery and placement of the mailboxes are done in advance, the customer will begin receiving their mail in a timely manner upon moving in or upon approval of request for delivery service in rural areas. Many utility and insurance companies also use this data to validate a customer's address to establish initial service and policies.

All too often, when we receive a phone call to begin mail delivery to a customer that has just settled on their house, we have not been previously advised as to the street name and therefore have not yet included their address into our database. If we have not determined if delivery will be established on one or both sides of the street, the mailbox may have been erected on the wrong side of the street by the developer or customer. The customer must then pick up their mail at the post office until all requirements are finalized for delivery to be established.

The Postal Service is also not responsible for assigning addresses to customers unless they are in rural areas not yet assigned city-style street addresses by 911. In these cases, the addresses we assign are mailing addresses consisting of RR and Box #'s only.

If the delivery area has not yet been converted to 911 city-style street addresses, and the municipality or county is going to begin the readdressing project, they must contact the District Address Management Systems Office to sign a confidentiality form. This should be done prior to the start of the project so that they are given a copy of the guidelines necessary to be followed when submitting these new street names and addresses to us. Information regarding current mailing addresses can not be discussed prior to this step being completed. This will also avert many problems for customers when they are notified by the municipality of their new 911 physical street addresses.

Once rural addresses are converted to city-style addressing for 911 identification, any subsequent changes to the original street addresses also need to be submitted to the Postal Service before we can begin delivery of mail to the customer at this newly assigned address.

Thank you for the opportunity to explain our procedures and the reasons for our need of this information. Advance planning, as you are well aware, leads to successful implementation of any project, and avoids unnecessary problems. We look forward to working with you in the future. Please feel free to call my office at any time with questions or concerns that you may have.

Pamela Osman

1425 CROOKED HILL RD
HARRISBURG PA 17107-9321
717-257-4888
FAX: 717-257-5522

MONTHLY ACTIVITY AND STATISTICAL REPORT

JUNE 2014

Monthly call volume, radio traffic and EMD statistics for specified month.

TABLE OF CONTENTS

Contents

Statistical Analysis Information

HIGHLIGHTS

When analyzing Luzerne County 9-1-1 call volume statistics, it is extremely important to note the 9-1-1 center is a call-taker/dispatch facility. Meaning, for every 8 hour shift, there are dedicated call-takers assigned to answer and route all incoming calls to the appropriate police, fire/EMS zones (DISPATCHERS). The standard recommended by both (NENA) National Emergency Number Association and (APCO) Association of Public Safety Communications Officials, and the Pennsylvania Administration Code for Emergency Management is that 90% of all 9-1-1 calls are to be answered within 10 seconds of presentation to the (PSAP) Public Safety Answering Point.

PSAP OPERATIONS HIGHLIGHTS

Once the calls are processed and routed, it becomes the responsibility of the dispatchers to "dispatch" the appropriate units to the call and handle radio traffic as well. Overflow calls can be answered by any position on the PSAP floor if the need arises, however, there is a misconception if there are 12 employees per shift, that all calls are distributed evenly among these employees.

There are **4 call-takers** assigned to first and second shift and **3 call-takers assigned** to third shift.

Shift times are as follows:

First shift: 0730 – 1530 **Second shift**: 1530 – 2330 **Third shift**: 2330 – 0730

As per the collective bargaining agreement, first and second shift have minimum staffing levels of **12** Telecommunicators per shift. Third shift has a minimum staffing level of **10** Telecommunicators.

LOOKING AHEAD

Statistics compiled from a 2012 statewide report issued by (PEMA) Pennsylvania Emergency Management Agency shows the Luzerne County PSAP as the 7th busiest (PSAP), out of 67 dispatch centers within the Commonwealth of Pennsylvania. The 9-1-1 center currently dispatches and handles calls for 76 municipalities within Luzerne County and currently has an average yearly call volume of almost 500,000. There are approximately 240 police, fire and EMS agencies within Luzerne County that 9-1-1 dispatches and provides support services for. The 9-1-1 center averages approximately 1,400 calls daily. Holidays, storms and major catastrophic events will increase our daily call volumes significantly. Luzerne County 9-1-1 processed a total of 461,885 calls in 2013.

Fred J. Rosencrans- Luzerne County 911

9-1-1 Executive Director

July 8, 2014

Monthly Call Volume Summary

- 1st shift- Monthly call volume for JUNE 2014 is 15,201 calls. 3,800 calls per week. 507 calls per day/shift. 127 calls per call taker/shift (4 call takers). 16 calls per person an hour 1 call every 3.75 minutes per call taker (overall average).

- 2nd shift- Monthly call volume for JUNE 2014 is 17,650 calls. 4,413 calls per week. 588 calls per day/shift. 147 calls per call taker/shift (4 call takers). 18 calls per person an hour or 1 call every 3 minutes per call taker (overall average).

- 3rd shift- Monthly call volume for JUNE 2014 is 7,228 calls. 1,807 calls per week. 241 calls per shift. 80 calls per call taker/shift (3 call takers). 10 calls per person an hour or 1 call every 6.00 minutes per call taker (overall average).

- Total calls amongst all 3 shifts: 40,210, which consists of 9-1-1, Administrative and outgoing lines.

  - ✓ Effective AUGUST 2013, 9-1-1 has implemented a recording for 911 callers, notifying them to remain on the line during periods of extremely high call volumes.

Monthly Radio/Dispatch Activity Summary

➢ For the month of JUNE 2014, in addition to the 40,079 telephone calls processed, there were an additional 104,497 radio transmissions handled by LC911 dispatchers on all 3 shifts.

➢ Relative to hours, the 104,497 transmissions equated to 615.62 hours of radio transmissions amongst 26 channels.

➢ Additional average of 3,483 radio transmissions per day or 21 total hours of radio transmissions per day.

Monthly Emergency Medical Dispatch (EMD) Summary

➢ In addition to the standard call taking and dispatch functions, Telecommunicators are trained to administer lifesaving emergency medical care (EMD) instructions over the phone. For the month, dispatchers/call takers administered EMD instruction to 300 incoming 9-1-1 callers.

1st shift- 159

2nd shift- 82

3rd shift- 59

Personnel Actions

- ➤ (5) Vacancies for 911 Telecommunicator (TC) exist as of July 8th. The open TC positions have been approved and tests are being administered. Once all Telecommunicator positions are filled, this will bring the LC911 Telecommunicator to full budgeted complement of 58. First review of applications is July 14th, 2014.

- ➤ (1) Vacancy for CAD/GIS Supervisor. Applications are due July 14th, 2014. Interviews for the position to be scheduled after that.

- ➤ (1) Vacancy for PSAP Supervisor currently exists. First review of applications will be July 21st, 2014.

Contact Information

Company Information

Luzerne County 911
100 Young Street
Hanover Township, Pa. 18706

Tel: (570)826-3059
Fax: (570)826-3056
Web site: www.luzernecounty911.com

Brief Comparison of York County 911 and Luzerne County 911

APPENDIX G

Positions (Non-dispatcher)	York County	Luzerne County	Comments:
911 Executive Director	1	0	Oversees EMA & Dept of Emergency Services; Equivalent to Tanis Manseau?
911 Director	1	1	*Referred to as Executive Director in Luzerne
Executive Administrative Assistant	1	1	
Receptionist/Secretary	1	1	
Human Resources Specialist	1	0	
911 Deputy Director (Administration)	1	1	Referred to as PSAP Manager in Luzerne
Lead Training Supervisor	1	0	
Training Supervisors	4	1	Referred to as Training & Protocol Supervisor in Luzerne
Quality Assurance Supervisor	1	1	Referred to as QA/ Policy & Procedure Supervisor in Luzerne
QA Specialists	3	0	
Scope/Central Records Sup. (For NCIC/CLEAN)	1	0	
Scope Operator	6	1	One operator M-F 8:30 to 4:30
911 Deputy Director (Resources)	1	0.5	Referred to as Data & Technical Support Manager in Luzerne
GIS & Addressing Supervisor	1	0.5	GIS Supervisor merged with CAD Supervisor position during creation
GIS Specialists	2	1	
Computer Aided Dispatch Supervisor	1	0.5	CAD Supervisor merged with GIS Supervisor position during creation
CAD Data Specialist	1	0	
CAD Data Entry Specialists	2	0	
911 Deputy Director (Technical)	1	0.5	Referred to as Data & Technical Support Manager in Luzerne
Phone Technical Analysts	1	0	*On Site Technician from Frontier for phones in Luzerne County
Radio Technical Analysts	3	0	
Information Services Administrator	1	0	
IT Technical Analysts	3	0	
Mobile Data Administrator	1	1	Referred to as Technical Support/Radio Supervisor in Luzerne
Mobile Data Technician	2	0	
911 Lead Shift Supervisors	3	0	
911 Shift Supervisors	8	7	Reports directly to PSAP Manager in Luzerne
911 Scheduling Supervisor	1	0	Is also a Shift Supervisor but with duty of making sure schedules are correct
Technical Support Specialist	0	1	
Total Management/Support Staff	**54**	**19**	

Telecommunicators/Dispatchers			
First Shift (Full time/Part Time)	27/4	20/0	
Second Shift (Full time/Part Time)	27/4	20/0	
Third Shift (Full time/Part Time)	25/2	18/0	
Total Dispatchers (Full time/Part Time)	**71/10**	**58/0**	

In-County Units

	Pink	Blue	
Police Agencies	24	48	(Municipal based only; not including State Park Rangers, Game/Fish Comm, School/Univ. Police, and Sheriff's Depts.
EMS Depts	33	42	(multiple units in many municipalities)
Fire Depts	61	75	(not including individual stations such as Hanover, Nanticoke, WB City)
ALS Depts	7	16	
Total agencies	125	181	

Call Volume (Year 2013)

	Pink	Blue	
911 Calls	290,331	219,188	
10 Digit Calls	83,104	225,002	
Total 911 & 10 Digit Calls	373,435	444,190	

Municipalities	72	76	

Population	434,000	321,000	

Misc Telecommunicator Duties:

Calling Hospitals for incoming patients/trauma alerts
Calling out Municipal DPW persons
Calling Tow Truck companies
Calling utility companies for emergency situations
Calling out Magistrates & ADA's
Calling Aero-Medical helicoptors
Calling Animal Control (Dogs, Bees, Bears)
Entry into NCIC/CLEAN; faxing warrants, and confirming wants

Third Class County 9-1-1 Centers	Total Annual Budget costs	Total Call Volume	Cost per call
BERKS COUNTY	$ 8,434,573.67	345,619	$ 24.40
CHESTER COUNTY	$ 13,255,328.00	274,756	$ 48.24
CUMBERLAND COUNTY	$ 5,153,017.61	266,204	$ 19.36
DAUPHIN COUNTY	$ 3,878,939.35	371,323	$ 10.45
ERIE COUNTY	$ 5,446,363.00	188,273	$ 29.93
LACKAWANNA COUNTY	$ 4,015,773.00	274,958	$ 14.61
LANCASTER COUNTY	$ 10,480,809.23	491,072	$ 21.34
LEHIGH COUNTY	$ 4,867,851.00	295,682	$ 16.46
LUZERNE COUNTY	**$ 5,704,285.40**	**444,190 ****	**$ 12.84**
NORTHAMPTON COUNTY	$ 5,269,587.95	335,584	$ 15.70
WESTMORELAND COUNTY	$ 8,594,443.00	336,569	$ 25.54
YORK COUNTY	$ 8,757,052.84	390,776	$ 22.41

**Second highest call volume