

Cumberland County, NJ

Communications System Analysis and Feasibility Study for Consolidating Police Dispatch Services

Technical Report

May 17, 2011



Consolidation Study Background

Operational Needs Assessment

- The County procured V-COMM Team for unbiased Feasibility Study regarding the consolidation of existing PSADP* Operations and Services
- V-COMM gathered statistics from each local PSADP and County Comm. Center
 - Conducted interviews
 - Carried out site visits
 - Gathered concerns from agency personnel
- Impending Next-Generation 9-1-1 (Next Gen. or NG 9-1-1) Mandate
 - Impacts each call center
 - Must receive 9-1-1 calls via any wired, wireless, or IP-based device (i.e.- text/picture/video messages, emails, etc)
 - Federal initiatives will require implementation of new technologies and systems at the state level
 - State still evaluating how to structure mandate to PSADPs, standards not yet finalized
 - Impacted study results regarding future equipment upgrade expense

* - Public Safety Answering/Dispatching Point



Consolidation Study

Calculated Staffing Requirements

- Levels of Consolidation Considered:

Consolidation Scenario	Requires Immediate Dispatch Equipment Replacement	Dispatch Equipment Replacement Required within 5 Years
0 – None County remains as is	No	Substantial
1 – Partial Bridgeton moves to County Center	Minimal	Substantial
2 – Partial Bridgeton and Millville move to County Center	Minimal	Substantial
3 – Full Bridgeton, Millville and Vineland move to County Center	Substantial	Included in Initial Upgrade

- Based upon data from surveys and interviews
- Standard calculations* used to determine the required amount of 9-1-1 calltakers and dispatchers to support peak and non-peak shifts[†]
- Calculated number of full-time employees (FTEs) required to support 24x7x365 operation non-peak (Shift 1), peak shifts (Shift 2)

* Traffic calculations made based upon Erlang B standard, staffing calculations performed using APCO standard methods.

[†]Based on the County's current 12-hour shift schedule



Consolidation Study

Consolidation Scenario

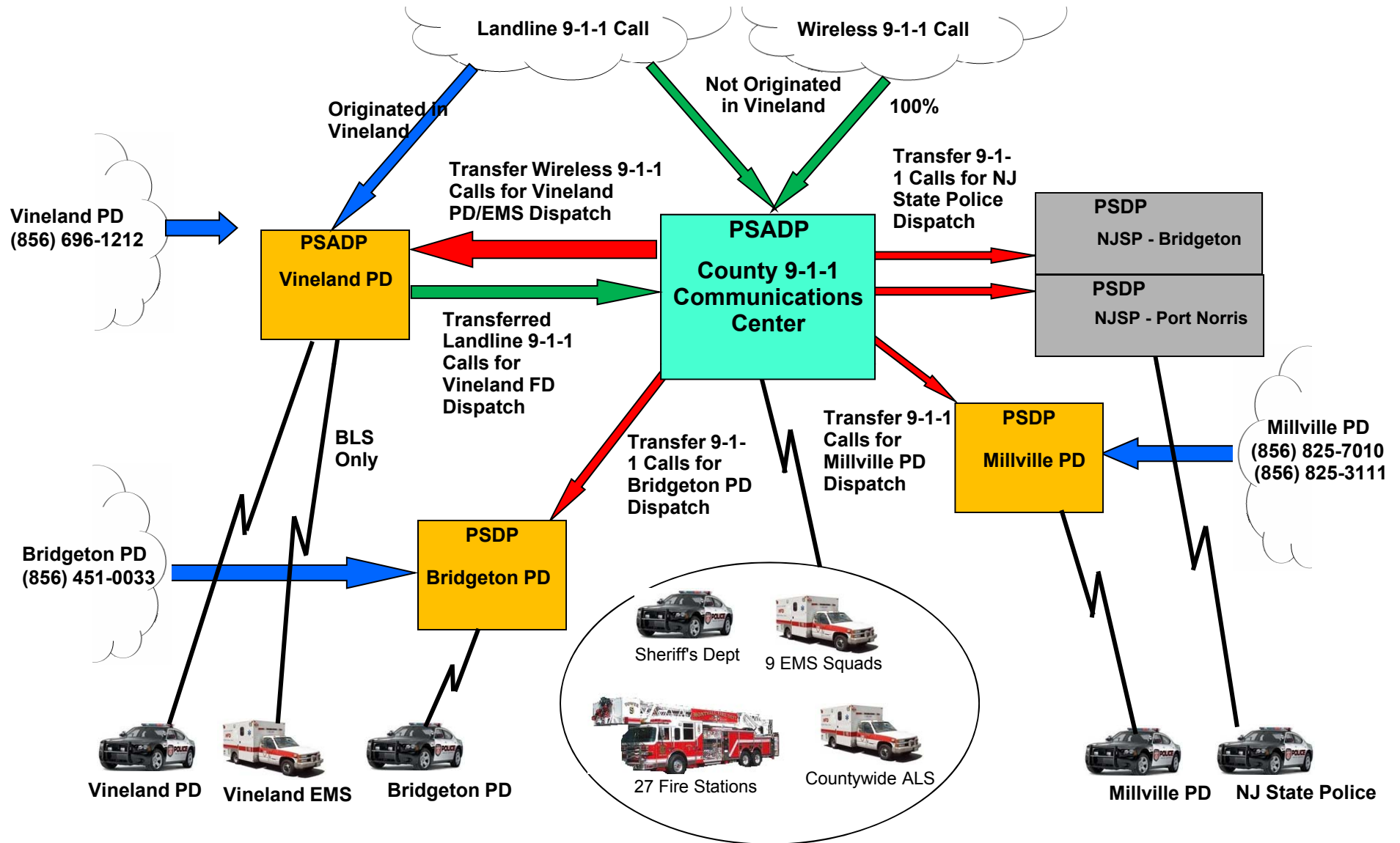
- V-COMM Calculated all expected Capital Costs to support the consolidation effort and the 1st 5 years of operation:

	Scenario 1	Scenario 2	Scenario 3
County Consolidation Capital, by Scenario	\$307,000	\$402,500	\$1,757,500
Projected 5-Year County Equipment Upgrade Capital	\$688,000	\$774,000	\$0
Total County Projected 5-Year Capital	\$995,000	\$1,176,500	\$1,757,500

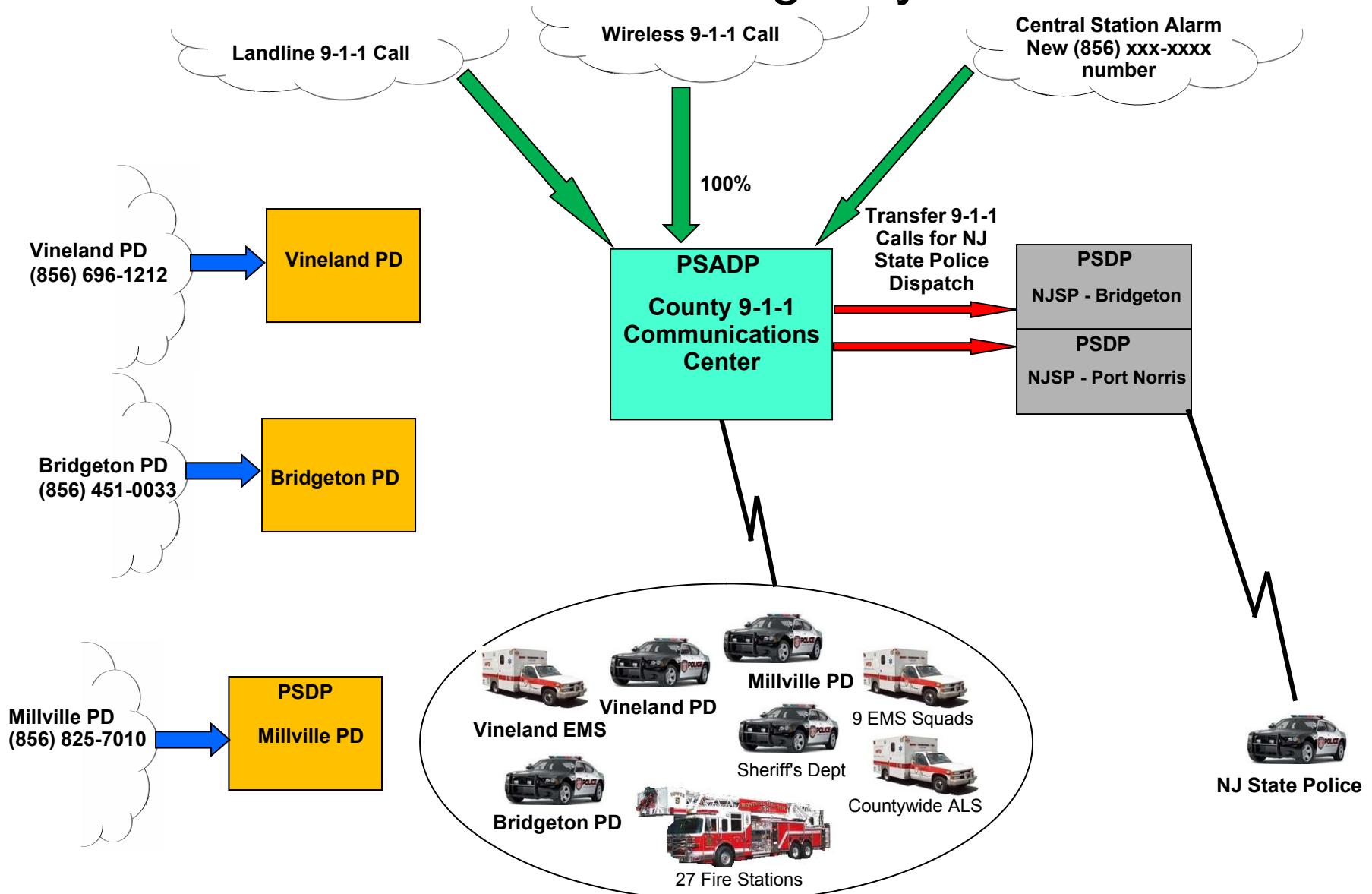
- V-COMM recommends the complete consolidation (Scenario 3):
 - The County and each of the towns will soon incur significant costs (within 5 years) to upgrade PSADP core equipment regardless of consolidation (even if current environment maintained)
 - Complete consolidation offers the best case for State PSADP funding moving forward and also lowers overall expenditures for all entities
 - The V-COMM recommended upgrades would prepare the County facility and PSADP equipment for upcoming State 9-1-1 mandates, as well as provide the highest level of service to Public Safety Countywide



Current Emergency Call Flow



Consolidated Emergency Call Flow



Consolidation Study

Bridgeton

Bridgeton Consolidation Comparison	No Consolidation		Consolidated			
				Scenario 1	Scenario 2	Scenario 3
	Annual	Five Years	Annual	Five Years	Five Years	Five Years
Operating Expense						
Salary	\$360,000	\$1,800,000	\$238,404	\$1,192,020	\$1,192,020	\$1,192,020
Equipment & Maintenance	\$20,000	\$100,000	\$10,000	\$50,000	\$50,000	\$50,000
Capital Expenditures						
Initial Relocation		-		\$307,000	\$201,250	\$300,000
Five Year Upgrade		\$250,000		\$114,667	\$110,571	-
Fiber Costs to support NG 911		\$350,000		-	-	-
Total Five Year Expenditures		\$2,500,000		\$1,663,687	\$1,553,841	\$1,542,020
Savings over Five Years				\$836,313	\$946,159	\$957,980



Consolidation Study

Millville

Millville Consolidation Comparison	No Consolidation		Consolidated			
				Scenario 1	Scenario 2	Scenario 3
	Annual	Five Years	Annual	Five Years	Five Years	Five Years
Operating Expense						
Salary	\$448,243	\$2,241,217	\$238,404	-	\$1,192,020	\$1,192,020
Equipment & Maintenance	\$45,388	\$226,939	\$22,694	-	\$113,470	\$113,470
Capital Expenditures						
Initial Relocation		-		-	\$201,250	\$300,000
Five Year Upgrade		\$250,000		-	\$110,571	-
Fiber Costs to support NG 911		\$450,000		-	-	-
Total Five Year Expenditures		\$3,168,156		-	\$1,617,311	\$1,605,490
Savings over Five Years				-	\$1,550,845	\$1,562,666



Consolidation Study

Vineland

Vineland Consolidation Comparison	No Consolidation		Consolidated			
				Scenario 1	Scenario 2	Scenario 3
	Annual	Five Years	Annual	Five Years	Five Years	Five Years
Operating Expense						
Salary	\$975,613	\$4,878,063	\$715,212	-	-	\$3,576,060
Equipment & Maintenance	\$28,280	\$141,400	\$14,140	-	-	\$70,700
Capital Expenditures						
Initial Relocation		-		-	-	\$625,000
Five Year Upgrade		\$625,000		-	-	-
Fiber Costs to support NG 911		\$450,000		-	-	-
Total Five Year Expenditures		\$6,094,463		-	-	\$4,271,760
Savings over Five Years				-	-	\$1,822,703



Conclusion

- Maximum Project Savings occurs with implementation of Scenario 3 for each entity
- Projected Savings Over Initial 5-Year Period:
 - Bridgeton: **\$957,980**
 - Millville: **\$1,562,666**
 - Vineland: **\$1,822,703**
- Operational Considerations
 - Greater access to funding paths as consolidated PSADP
 - Better positioned for NG 9-1-1 Compliance
 - Estimated 20 Year Equipment Life on PSADP Core Equipment (minus computers)



Questions?

Thank You

