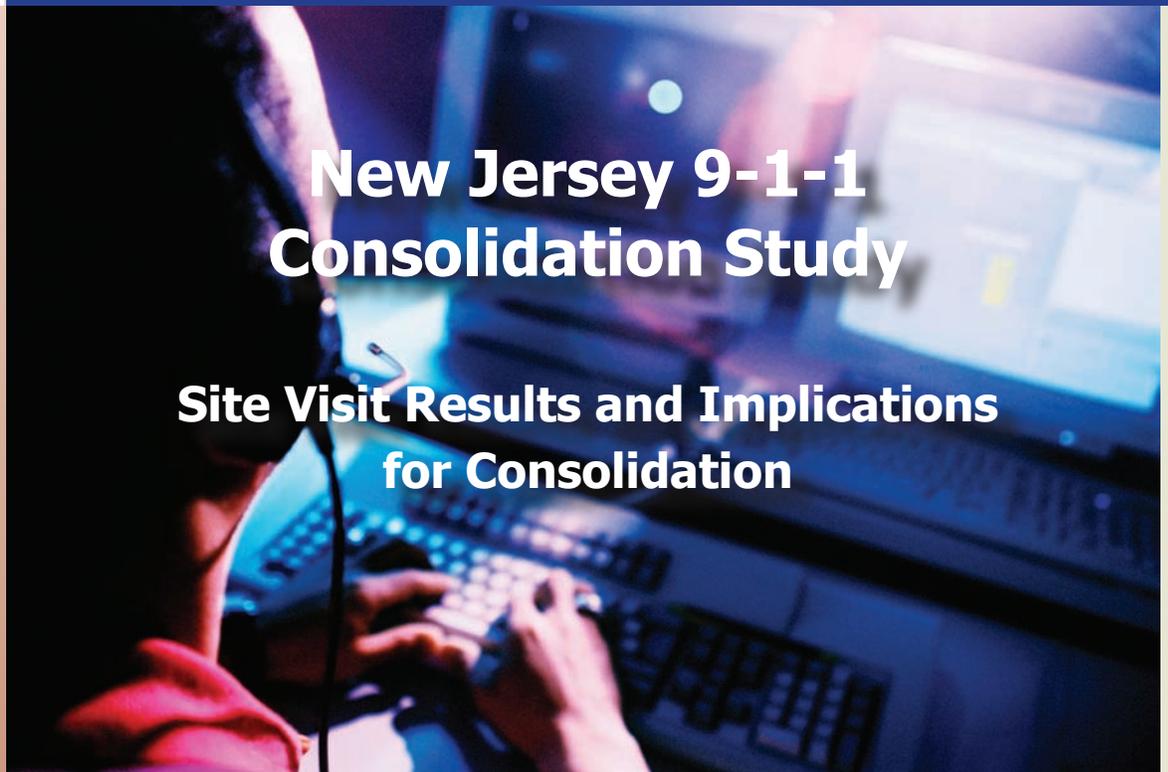




JOHN J. HELDRICH CENTER FOR
WORKFORCE DEVELOPMENT



New Jersey 9-1-1 Consolidation Study

Site Visit Results and Implications for Consolidation

Report prepared for the State of New Jersey
Office of Information Technology and the
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INTRODUCTION AND SUMMARY OF FINDINGS

In 1999, the Center for Government Services at Rutgers, The State University of New Jersey completed a study of New Jersey’s E9-1-1 system. The study offered a snapshot of the extensive and decentralized network of communications centers that receive incoming calls requesting emergency assistance and that dispatch police, fire, and medical units. In 2005, the New Jersey Office of Management and Budget commissioned the John J. Heldrich Center for Workforce Development at Rutgers University to build on the findings of the 1999 study by exploring ways to improve the efficiency of New Jersey’s E9-1-1 system while maximizing the use of available funding.

Presently, there are over 200 Public Safety Answering Points (PSAPs) and more than 100 enhanced Public Safety Dispatch Points (PSDPs) operating in New Jersey. The central goal of this study is to determine whether a consolidation of PSAPs and PSDPs could reduce costs while maintaining and/or improving the level of service. In this report, consolidation is defined as the

reduction in the number of locally managed PSAPs and PSDPs that provide emergency communications services.

This report is the result of site visits and interviews with officials from 12 PSAPs. The focus of this report is on the current landscape of local operations, funding, staffing, equipment, and technology. In addition, this report identifies issues associated with consolidation, including barriers and opportunities, and presents recommendations for promoting consolidation in New Jersey. It is the third of four deliverables to be produced by the Heldrich Center for the State of New Jersey’s 9-1-1 Consolidation Study.

With input from the New Jersey Office of Emergency Telecommunications Services (OETS), the research team selected a cross section of PSAPs to visit as part of onsite research efforts. The PSAPs were selected based upon several criteria including: geographic location, jurisdiction size, and PSAP governance structure. During each site

Table 1. PSAP Site Visit Locations

| PSAP | County | Population | Communities Served | PSDPs |
|---|------------|------------|--------------------|-------|
| Andover Township | Sussex | 9,911 | 3 | 0 |
| Burlington County Communications Center | Burlington | 401,141 | 40 | 6 |
| Cherry Hill | Camden | 69,965 | 1 | 0 |
| Hamilton Township | Mercer | 87,109 | 1 | 0 |
| Jersey City | Hudson | 240,055 | 1 | 1 |
| Mahwah | Bergen | 45,763 | 5 | 3 |
| Maywood | Bergen | 9,523 | 1 | 0 |
| North Wildwood | Cape May | 4,935 | 1 | 0 |
| Ocean City | Cape May | 27,493 | 3 | 0 |
| Princeton Borough | Mercer | 14,203 | 1 | 0 |
| South Amboy | Middlesex | 7,913 | 1 | 0 |
| Warren Township | Somerset | 14,259 | 1 | 0 |

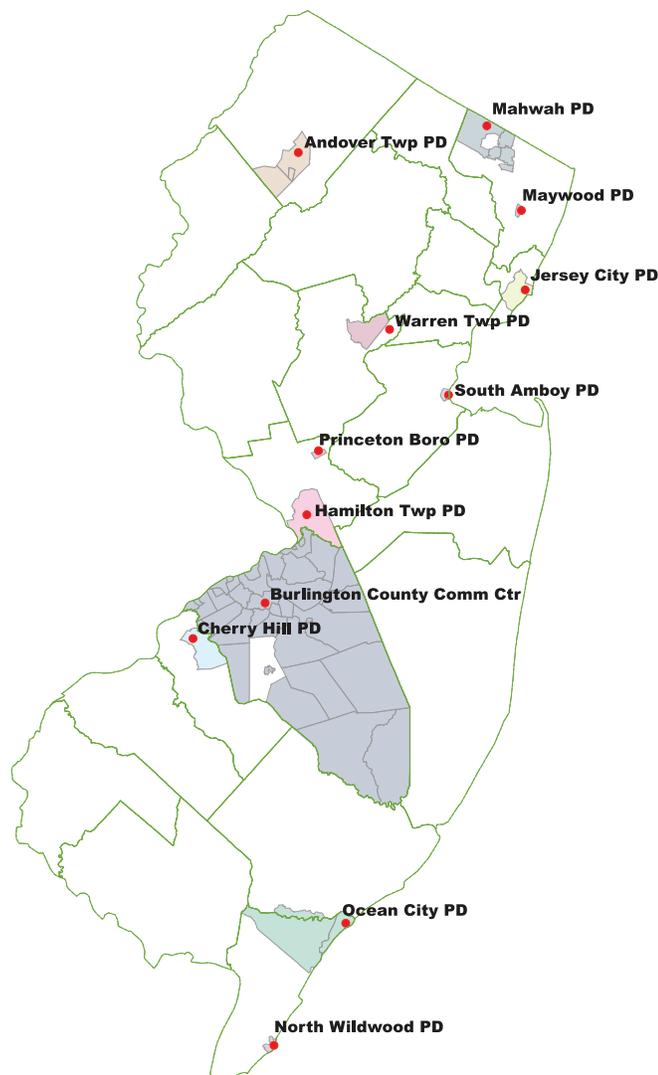
visit, the research team interviewed PSAP officials and conducted additional interviews with key local officials, OETS staff, and county 9-1-1 coordinators. The 12 sites selected for the study are listed in Table 1 and their locations are illustrated in Map 1.

The research yielded a range of findings on 9-1-1 operations and the key issues affecting consolidation:

- Historically, New Jersey has not played a strong role vis-à-vis local PSAP operations and consolidation, either through setting more than minimum standards or by providing funding.

- The decision to acquire and fund equipment is made almost exclusively at the local level. Therefore, facility and equipment upgrades are highly dependent on local funding and local will. Often, decisions are limited by budget constraints and perceived needs are compromised.
- There is no formal assessment or agreed-upon definition of service quality. Clear performance goals are practically nonexistent and assessment of response times and service outcomes are rarely employed. Although local officials believe they are providing high-quality service, it is not clear how service is measured.

Map 1. PSAP Site Visit Locations



- The job qualifications, training opportunities, experience, and compensation of call takers and dispatchers are inconsistent and wide ranging, and turnover of call takers, especially in the small call centers, is a problem.
- Local 9-1-1 officials are making independent decisions to consolidate services. For the most part, budget pressures and concerns about public safety drive many local decisions to consolidate. In fact, preliminary data suggest that agencies with higher call volumes are more efficient than those with lower call volumes.
- The 9-1-1 call centers studied cited similar benefits and barriers to consolidation. Most local officials agreed that the benefits of consolidation include improved service, equipment, and staffing. However, all of the officials interviewed acknowledged the challenge of overcoming concerns relating to the issues of “home rule,” quality assurance, and loss of local autonomy.
- Although financial incentives are a promising strategy, they are not necessarily sufficient to produce consolidation. A consolidation program should include public education and outreach, technical support, third party facilitation, and clear performance metrics.
- The program design should support two basic consolidation options — inter-local and countywide. The appropriate approach would be determined locally on a jurisdiction-by-jurisdiction basis. In all instances, efforts should be made to support a single operation for call taking and dispatch.
- The state 9-1-1 office should provide additional support and guidance to local agencies seeking to consolidate their 9-1-1 call centers in the form of standards for information systems, staff training and development, quality assurance, and governance.

Given the major findings summarized above, as well as the lessons learned from other states, this report presents options for promoting consolidation in New Jersey. Recognizing that incentives alone may be insufficient to drive consolidation, the preliminary recommendations combine financial incentives with other strategies to target local areas that have cooperated in the past and/or that might be interested in consolidation.

The next section of this report describes findings related to local operations, equipment and technology, facilities, personnel, and funding. Then the report describes local officials’ perspectives on consolidation, including perceived barriers and opportunities. The final section lays out preliminary recommendations to state policymakers for encouraging further consolidation in New Jersey. Appendix A contains a list of the individuals interviewed for this study. The selection criteria and site visit methodology are more fully described in Appendices B and C.

ISSUES AND TRENDS

During the site visits and interviews, local officials identified a variety of issues and trends that have an impact on the day-to-day operations in New Jersey PSAPs. The research illustrates that PSAPs and the communities they serve are facing a seemingly unending series of challenges. Among the patterns observed were the growth of immigrant populations within certain communities, municipalities making the transition from resort to year-round residential communities, and traditionally blue-collar communities expanding/ changing to include more affluent populations. These changing circumstances are compounding the more traditional challenges connected to adequately sizing a community's emergency response system, including "spillover" crime from neighboring communities, proximity to major motor transportation and railroad routes, and large daytime populations.¹ Coupled with these challenges is the introduction of wireless communication devices and new technologies, such as Voice-Over-Internet Protocol. And, finally, overlaying all of these issues is the need to plan for and implement homeland security requirements.

Operations

As part of its investigation, the Heldrich Center research team asked PSAP officials to describe their facilities, characterize their overall operations and workflow, and quantify their call volume. Local officials (including PSAP operators, chiefs of police, and elected and appointed officials) believe that their PSAPs are ably serving their communities. Most report an effective response rate, a low negative incident rate, and overall community satisfaction with the services provided. Although this perception is most likely accurate, actual evidence of customer satisfaction and response rates is not well documented. The key findings on local operations are summarized below.

Issue #1: There is a lack of information and data analysis at all levels of New Jersey's Eg-1-1 system, as well as a lack of resources necessary to generate data that could measure activity and performance.

Few of the PSAP officials interviewed could provide specific data on call volume activities, whether wire-line or wireless 9-1-1 calls. Many submitted estimates and data indicating that a significant number of calls for emergency response continue to come across the 10-digit administrative lines. While specific call volume data were not always available, most PSAP operators believe that overall call volume has remained steady or increased somewhat in recent years.

Few PSAPs have established metrics by which to measure call center performance. Only half of the PSAPs visited reported some form of performance measure (i.e., "'two-ring' response" or "less than two-minute response"). Even where metrics exist, few of the sites regularly assess or monitor call center performance. Performance assessment typically consists of either observation of live calls by supervisors or exception reporting. Most PSAPs only evaluate performance if there has been a complaint or a negative 9-1-1 incident. Only a few PSAPs presented defined performance metrics and were able to detail whether those standards were met during a given period.

Issue #2: Larger, consolidated PSAPs are more likely to forward some calls for emergency response to another entity to respond.

The sites visited employed one of two approaches to organizing call-taking and dispatch services. Under the first approach, some call centers that tend to serve a single community and a small population answer all calls and dispatch all emergency services (police, fire, and emergency

¹ The term "daytime population" is used to differentiate between a community's resident population (i.e., homeowners, renters, etc.) and its daytime population consisting of workers, shoppers, commuters, etc.

medical services). For example, North Wildwood, South Amboy, Maywood, Princeton Borough, and Warren Township provide dispatch services for all emergency services.

Larger and consolidated PSAPs, such as Cherry Hill, Jersey City, and Burlington County, are more likely to forward some calls to another entity to dispatch fire, emergency medical, and/or police services. In some instances, the PSAP negotiates local protocols for dispatching responders with the contracting community. In others, the community has little input into how emergency services are dispatched. One call center visited forwards fire and emergency medical services calls to a centralized call center for dispatch. Informally, this same PSAP broadcasts 9-1-1 transfers over the fire and ambulance radio frequencies. This process was adopted to reduce response time. The officials interviewed expressed a strong belief that this process reduces response time by as much as four minutes.

Equipment, Technology, and Facilities

During the site visits, the research team learned how local officials acquire and maintain their 9-1-1 equipment and also inquired about the capabilities and limitations of equipment, future equipment needs, and long-range planning efforts. Not surprisingly, procurement decisions are driven primarily by budget considerations and secondarily by required functionality. Because of the heavy dependence on local funding and the disparities in tax bases and local budgets, some PSAPs are one or two generations behind others in terms of their capabilities and ability to adapt to new technologies. The key findings related to equipment, technology, and facilities are summarized below.

Issue #3: Equipment quality and capabilities vary widely among call centers.

Decisions about equipment acquisitions are made almost exclusively at the local level. As a result, facility and equipment upgrades are highly dependent on local funding and local will.

According to the site interviews, more often than not, decisions are limited by budget constraints and perceived needs are frequently compromised. There were a few instances, however, where some call centers successfully obtained state or federal grants to fund some or all of their equipment purchases.

The research team observed a range of equipment quality and capabilities among the 12 call centers visited. There were at least five kinds of call-taking equipment and a tremendous variety of recording equipment installed. While almost every PSAP visited employed a Computer-Aided Dispatch (CAD) system, at least half were not fully interfaced with the call-taking equipment.

Generally, county coordinators agreed that the quality of PSAP equipment and technology ranged widely. County coordinators characterized quality as ranging from “Class A” to merely “adequate.”

Even where the equipment was capable of performing many of the functions necessary to an efficient, integrated call center, those functions were often underutilized. For instance, the CAD system would not be integrated with the call-taking equipment, or integrated mapping would not be available. Often, according to the site interviews, this was the result of budget constraints; amounts as small as \$2,000 would be all that was needed to implement a desired upgrade. In other instances, some PSAPs reported their equipment is capable of generating canned or ad hoc reports, yet maintained that they do not run or review reports.

Issue #4: New network requirements and expansion of wireless technologies have driven many PSAPs to make significant investments in their facilities and equipment and there is little long-term planning regarding investment renewal.

Many PSAPs are upgrading their technologies and equipment in response to the network redesign and Phase II wireless requirements. Among the facilities visited by the research team, four had recently constructed new facilities or

undergone renovation. Five PSAPs are procuring new equipment and several more expressed a desire to upgrade their current equipment. Across the board, PSAPs are looking to integrate mapping into their call center operations. Most have the capability, but are lacking the necessary interface with the call-taking equipment and/or the necessary software. Only Cherry Hill and Burlington County were making use of integrated mapping.

In the face of changing technology and ever-expanding technical requirements, few, if any, of the officials interviewed were able to point to any significant long-range planning goals for their equipment or operations. Interviews with PSAP staff indicated that, for the most part, information technology (IT) support for call centers is deployed on an ad hoc basis, with the person who is “into” IT bearing the primary responsibility for providing initial technical support and researching new technologies. This process appears to be informal with much reliance on networking to learn from and build on the experiences of PSAP officials in other jurisdictions.

County coordinators, too, expressed a general sense that the system is in transition. However, because of the limited planning role played by county coordinators, few had specific information. They exhibited a wide range of familiarity with local PSAP operations, from little to no idea to considerable knowledge.

Staffing and Management

During the site visits, the research team asked PSAP operators to discuss their personnel and human resource issues, including staffing levels, job responsibilities, compensation, recruitment, retention, and training requirements. Here, too, the research team noted a broad spectrum of approaches and philosophies. In one instance, an elected municipal official appeared to exert extraordinary control over all recruiting and hiring decisions of a particular PSAP. In other PSAPs, the opposite was true and the local PSAP operators

had complete autonomy to recruit, hire, and develop call center staff. Local decisions about staffing, training, and compensation resulted in considerable disparity among PSAPs. The key findings related to staffing and management are summarized below.

Issue #5: Compensation for telecommunicators ranges widely and mandatory overtime is commonly used to ensure adequate staffing of call centers.

Starting salaries for telecommunicators range widely, from a low of just over \$18,000 to a high of \$46,000 per year. Most telecommunicators receive a starting salary in the low- to mid-\$20,000s range. There is some opportunity for advancement in most PSAPs. Experienced telecommunicators could receive salaries as high as \$50,000 per year, with most PSAPs compensating their senior call takers in the mid- to high-\$30,000s range. With one exception, larger PSAPs tend to compensate telecommunicators at a higher rate than the smaller PSAPs.

Most call takers and dispatchers are members of unions such as the Communications Workers of America, the Teamsters, or local municipal employee associations. Union membership appears to have little relationship to the rate of compensation; those PSAPs offering both the lowest and highest salaries are non-union agencies. In fact, two of the four PSAPs reporting the lowest salaries employ telecommunicators that are covered by union contracts, while of the two agencies reporting the highest salaries, only one is covered by a union contract. Table 2 compares salaries and union coverage for the PSAPs visited.

All but one PSAP reported relying on mandatory overtime to ensure sufficient staff coverage. At the same time, many of these same officials responded that they experienced little trouble recruiting telecommunicators and did not characterize their operation as “understaffed.” Except for Jersey City, the PSAPs did not express a concern about retention and turnover. Hampered by a citywide hiring freeze, the Jersey City PSAP reported that it had over 20 vacancies.

Table 2. Salary and Union Coverage Comparisons

| PSAP | Salary | Low | High | Average | Union |
|---|-----------------------------|--------|--------|---------|-------|
| Andover Township | \$12.23/hour - \$19.87/hour | 21,402 | 34,000 | 27,701 | Y |
| Burlington County Communications Center | \$33,000 - \$48,000 | 33,000 | 48,000 | 40,500 | Y |
| Cherry Hill | \$23,771 - \$38,226 | 23,771 | 38,226 | 30,998 | Y |
| Hamilton Township | \$32,000 - \$48,000 | 32,000 | 48,000 | 40,000 | Y |
| Jersey City | \$20,500 - \$25,500 | 20,500 | 25,500 | 23,000 | Y |
| Mahwah | \$26,181 - \$35,000 | 26,181 | 35,000 | 30,591 | Y |
| Maywood | \$26,000 - \$35,000 | 26,000 | 35,000 | 30,500 | N |
| North Wildwood | \$21,000 - \$31,000 | 21,000 | 31,000 | 26,000 | N |
| Ocean City | \$33,842 - \$48,957 | 33,482 | 48,957 | 41,220 | Y |
| Princeton Borough | \$42,000 - \$50,000 | 42,000 | 50,000 | 46,000 | Y |
| South Amboy | \$10.62/hour | 18,585 | 18,585 | 18,585 | N |
| Warren Township | \$21,000 - \$50,000 | 21,000 | 50,000 | 35,500 | N |

Issue #6: Based on reported staffing and retention data, there appears to be little relation between compensation and retention rates.

PSAPs with the highest reported retention rates are distributed throughout the range of reported salaries. While the average retention rate among the call centers visited was 73%, the retention rate was as low as 30% and 33% for two of the PSAPs. Table 3 illustrates the reported retention rates for each of the PSAPs visited.

Interview responses indicated that turnover and retention rates have less to do with compensation and more to do with intangible factors such as work environment, professional development opportunities, day-to-day interaction with uniformed employees, and temperament. A comparison of retention rates and the survey responses specifying the reasons for leaving a job also indicated that turnover and low retention rates are attributable to a variety of factors not necessarily related to compensation. Table 4 illustrates the reasons cited for leaving the employment of a particular PSAP.

Issue #7: Fifty percent of the PSAPs visited require their telecommunicators to assume additional duties unrelated to E9-1-1; nearly half also report employing no more than one telecommunicator on at least one shift during a 24-hour period.

In addition to their call-taking and dispatch duties, many PSAP administrators require their telecommunicators to devote some portion of their workday to duties unrelated to E9-1-1. According to the officials interviewed, telecommunicators' duties include acting as a prison matron, providing clerical and administrative support, providing video surveillance of holding cells, and serving as the initial point of contact for walk-in traffic. Based on the data collected during the site visits, the team found that 7 of the 12 PSAPs require their telecommunicators to perform additional duties. At least one PSAP reported that its telecommunicators spend 50% to 75% of their time on other duties. Three PSAPs reported that at least one shift of telecommunicators spent 25% to 50% of their time on other duties. Table 5 illustrates the estimated amount of time telecommunicators spend on other duties.

Table 3. Retention Rates

| PSAP | Turnover in 2004 | Number of Full-Time Employees | Turnover Rate | Retention Rate |
|---|------------------|-------------------------------|---------------|----------------|
| Andover Township | 1 | 5 | 20% | 80% |
| Burlington County Communications Center | 7 | 86 | 8% | 92% |
| Cherry Hill | 7 | 10 | 70% | 30% |
| Hamilton Township | 3 | 14 | 21% | 79% |
| Jersey City | 10 | 43 | 23% | 77% |
| Mahwah | 2 | 6 | 33% | 67% |
| Maywood | 0 | 7 | 0% | 100% |
| North Wildwood | 1 | 4 | 25% | 75% |
| Ocean City | 2 | 9 | 22% | 78% |
| Princeton Borough | 2 | 5 | 40% | 60% |
| South Amboy | 2 | 3 | 67% | 33% |
| Warren Township | 0 | 5 | 0% | 100% |
| Average | | | | 73% |

Notes: Formulae used to calculate turnover and retention rate based on work done by APCO project RETAINS. Data for Jersey City and Mahwah collected during on-site interviews.

Table 4. Reasons for Leaving

| PSAP | Retention Rate | Pay | Schedule | Stress | Retirement | Other Emergency Services | Other | No Reason Given |
|---|----------------|-----|----------|--------|------------|--------------------------|-------|-----------------|
| Andover Township | 80% | | | | | | x | |
| Burlington County Communications Center | 92% | x | x | x | | | x | |
| Cherry Hill | 30% | | | x | x | | | |
| Hamilton Township | 79% | | | | | x | x | |
| Jersey City | 77% | | | | | | | x |
| Mahwah | 67% | | | | | | | x |
| North Wildwood | 75% | | | | | | x | |
| Ocean City | 78% | | x | | | | x | |
| Princeton Borough | 60% | | | | x | x | | |
| South Amboy | 33% | x | x | | | | | |

Note: Other reasons for leaving include: Death, failure to complete training, pursuit of higher education, and personal reasons.

Table 5. Time Spent on Other Duties²

| PSAP | Population | Day | Evening | Night | Average Time Spent on Other Duties | FTEs of Call Takers and Dispatchers | Call Volume (ALI dip Calls) |
|---|------------|-------|---------|-------|------------------------------------|-------------------------------------|-----------------------------|
| Andover Township | 13,016 | 12.5% | N/A | 37.5% | 25.0% | 5 | 2,402 |
| Burlington County Communications Center | 401,141 | 0.0% | 0.0% | N/A | 0.0% | 86 | 235,458 |
| Cherry Hill | 69,965 | 0.0% | 0.0% | 0.0% | 0.0% | 10 | 28,992 |
| Hamilton Township | 87,109 | 0.0% | 0.0% | 0.0% | 0.0% | 14 | 26,318 |
| Jersey City | 240,055 | 0.0% | 0.0% | 0.0% | 0.0% | 43 | 174,468 |
| Maywood | 9,523 | 62.5% | 62.5% | 62.5% | 62.5% | 7 | 1,696 |
| North Wildwood | 4,935 | 12.5% | N/A | 12.5% | 12.5% | 4 | 4,196 |
| Ocean City | 27,493 | 0.0% | 0.0% | N/A | 0.0% | 9 | 15,542 |
| Princeton Borough | 14,203 | 12.5% | 12.5% | 12.5% | 12.5% | 5 | 3,485 |
| South Amboy | 7,913 | 37.5% | 12.5% | 12.5% | 20.8% | 3 | 2,268 |
| Warren Township | 14,259 | 12.5% | N/A | 37.5% | 25.0% | 5 | 2,793 |

Notes: ALI dip calls are annualized by taking the seven-month total between February 2005 and August 2005 and adding an estimate for the remaining five months. Three eight-hour shifts are assumed and the average number of Full-Time Equivalents (FTE) per shift is calculated assuming three shifts per day. However, if there is no FTE reported for an evening or night shift, then the average is calculated assuming two shifts per day. Percentage of time on other duties represents the midpoint of ranges selected by the individual PSAP on the survey as follows:

| | | | | | |
|----------|------|--------|---------|---------|----------|
| Range | None | 1%–25% | 25%–50% | 50%–75% | 75%–100% |
| Midpoint | 0% | 12.5% | 37.5% | 62.5% | 87.5% |

Managers at several of the smaller PSAPs questioned the effectiveness of one-person shifts but acknowledged that budget constraints limit the ability to add a second call taker during one or more shifts. Table 6 shows the number of telecommunicators assigned to each shift. Even

where there is only one telecommunicator on a shift, there is generally a supervisor on premises or readily available to provide backup if required.

² Data presented in Tables 5 and 6 are based on responses to a statewide E9-1-1 survey distributed to all PSAPs and PSDPs in New Jersey. Eleven of the 12 PSAPs visited submitted a completed survey.

Table 6. Number of Telecommunicators Assigned per Shift

| PSAP | Population | Number of Call Takers and Dispatchers | | | Average Number of FTEs per Shift | Minimum Number of FTEs per Shift |
|---|------------|---------------------------------------|---------|-------|----------------------------------|----------------------------------|
| | | Day | Evening | Night | | |
| Andover Township | 13,016 | 1 | N/A | 1 | 1.0 | 1 |
| Burlington County Communications Center | 401,141 | 26 | 23 | N/A | 24.5 | 23 |
| Cherry Hill | 69,965 | 2.5 | 3 | 2.5 | 2.7 | 2.5 |
| Hamilton Township | 87,109 | 3 | 3 | 2 | 2.7 | 2 |
| Jersey City | 240,055 | 5 | 5 | 3 | 4.3 | 3 |
| Maywood | 9,523 | 1 | 1 | 1 | 1.0 | 1 |
| North Wildwood | 4,935 | 1 | N/A | 1 | 1.0 | 1 |
| Ocean City | 27,493 | 2 | 2 | N/A | 2.0 | 2 |
| Princeton Borough | 14,203 | 2 | 1 | 1 | 1.3 | 1 |
| South Amboy | 7,913 | 1 | 1 | 1 | 1.0 | 1 |
| Warren Township | 14,259 | 2 | N/A | 1 | 1.5 | 1 |

Note: Three eight-hour shifts are assumed and the average number of FTEs per shift is calculated assuming three shifts per day. If, however, there is no FTE reported for an evening or night shift, then the average is calculated assuming two shifts per day.

Issue #8: The level of professionalism, experience, and preparedness of telecommunicators varies throughout the Eg-1-1 system because ongoing training and professional development opportunities are not supported by funding and are not widely available.

Other than baseline training requirements for call takers and dispatchers, there are no standard state-level guidelines for staffing and no statewide requirements for staff development. The result is that PSAPs exhibit wide disparities in experiences and qualifications of call takers and dispatchers. As mentioned earlier, there is little opportunity to develop call takers in the smaller PSAPs; they offer neither a career path nor incentives for telecommunicators to remain.

Training is a significant expense for most PSAPs. The majority of officials interviewed indicated that they will pay their call takers while they are in training, although one PSAP did not. Again, there is a range of experiences—some PSAPs do not have to train their employees because they only hire experienced call takers, while others are forced to hire and then train inexperienced call takers. Coverage issues and budgets make it extremely challenging for some PSAPs to offer additional training in topics not mandated by the state. Many of the PSAPs expressed a desire for additional training in several significant areas (e.g., new technologies, language, major incident response).

County coordinators do not generally monitor compliance with training requirements. However, when asked, county coordinators observed that the level of training and staff qualifications ranges broadly from “okay to high” to “below average.”

Funding and Local Costs

During the site visits, the Heldrich Center research team asked PSAP officials to provide data on operating costs, revenue sources, and projections for future expenditures. While it was difficult for many jurisdictions to isolate expenditures strictly related to the PSAP, most were able to specify or provide reasonable estimates of salary obligations and the costs of recent equipment acquisitions. The key findings related to funding and local costs are summarized below.

Issue #9: A PSAP budget is typically incorporated into an overall budget for the municipal police department. It is therefore difficult to isolate precise costs for staffing and administration of 9-1-1 services.

Public officials interviewed for this study indicated that most equipment purchases are made through local bond issues or grant funding. In fact, the recent state grant program has provided funding for general assistance, equipment, and a special allocation to encourage consolidation. A number of the PSAPs visited indicated grant funds would be used to acquire mapping capability and wireless capacity.

To analyze funding, the Heldrich Center focused on employee costs reported by the local 9-1-1 officials interviewed. Employee costs are the largest ongoing expense for most PSAPs and are relatively simple to quantify. The Center calculated two measures of efficiency for the PSAPs visited during the first round of site visits: (1) cost per call and (2) average calls per FTE. Cost information is based on a total estimate of employee salary, overtime, benefits, and allowances reported in the survey.³ Data on the number of FTEs (measured as call takers and dispatchers) are also based on information provided by the local PSAP officials interviewed.

Information on call volumes is based on ALI dip data provided by Verizon and OETS. Estimates of call volume are based on 2005 data and estimates of cost information are based on 2004 data. The discrepancy in time periods for the two data sources is not significant for two reasons. First, the PSAPs indicated that call volume has been stable in recent years. As a result, there are not likely to be dramatic changes in call volume between 2004 and 2005. Second, information on employee costs should be comparable for 2004 and 2005.

Issue #10: According to preliminary data, it appears that PSAPs with higher call volumes are more efficient than PSAPs with lower call volumes.

Table 7 summarizes preliminary data on the sites that responded to the survey. It combines data on cost per call, average calls per FTE, average time spent on other duties, and minimum number of FTEs per shift. While the data presented in Table 7 cannot be used to draw general conclusions about all PSAPs in the state, it is possible to generate hypotheses that are being tested with a larger dataset. As Table 7 indicates, it appears that PSAPs with higher call volumes tend to have lower costs per call than PSAPs with lower call volumes.

Table 7 provides preliminary data on average calls per FTE for 11 of the 12 sites that were visited. Again, the data cannot be used to form the basis for general observations about all PSAPs. Any patterns suggested by these data are being tested with a larger dataset. As the table indicates, it appears that PSAPs with higher call volumes maintain a higher average level of calls per FTE than PSAPs with lower call volumes. This is another important indicator of efficiency as the more calls each dispatcher takes, the more efficient the operation is likely to be.

³ The research team also looked at the cost per call by calculating employee cost using the reported salary range for telecommunicators. Preliminary data show a similar pattern: lower cost per call for PSAPs with a higher call volume.

Table 7. Summary of PSAP Measures

| PSAP | Call Volume (ALI dip Calls) | Cost per Call | Average Calls per FTE | Average Time Spent on Other Duties | Minimum Number of FTEs per Shift |
|--|--------------------------------|------------------|--------------------------|---------------------------------------|--|
| Andover Township | 2,402 | 98 | 478 | 25.0% | 1 |
| Burlington County Communications Center | 235,458 | 23 | 2,726 | 0.0% | 23 |
| Cherry Hill | 28,992 | 23 | 3,207 | 0.0% | 2.5 |
| Hamilton Township | 26,318 | 30 | 1,872 | 0.0% | 2 |
| Jersey City | 174,468 | 25 | 2,714 | 0.0% | 3 |
| Maywood | 1,696 | 90 | 241 | 62.5% | 1 |
| North Wildwood | 4,196 | 45 | 1,044 | 12.5% | 1 |
| Ocean City | 15,542 | unknown | 1,719 | 0.0% | 2 |
| Princeton Borough | 3,485 | 55 | 694 | 12.5% | 1 |
| South Amboy | 2,268 | 53 | 753 | 20.8% | 1 |
| Warren Township | 2,793 | 101 | 556 | 25.0% | 1 |

Notes: ALI dip calls are annualized by taking the seven-month total between February 2005 and August 2005 and adding an estimate for the remaining five months. Cost per call includes employee salary, overtime, benefits, and allowance as reported on the E9-1-1 survey. Full-time equivalents (FTEs) are call takers and operators as reported on the survey. Percentage of the time spent on other duties represents the midpoint of the range reported in the PSAP survey as follows:

| | | | | | |
|----------|------|--------|---------|---------|---------|
| Range | None | 1%–25% | 25%–50% | 50%–75% | 5%–100% |
| Midpoint | 0% | 12.5% | 37.5% | 62.5% | 87.5% |

PERSPECTIVES ON CONSOLIDATION

During the site visits, PSAP operators shared their perspectives on opportunities and barriers to consolidation. In addition, researchers asked county coordinators, some city or town administrators, and those police chiefs not interviewed during the site visits to comment on the potential for consolidation in their jurisdictions. This section summarizes the main findings from those interviews.

There are three distinct approaches to consolidation of answering or dispatch services.

The sites visited adopted one of three approaches to consolidation. The first model is the fee-for-service or contractual arrangement. Several PSAPs receive an annual payment in return for provision of emergency communications services to neighboring municipalities. Contracts and payments for service are typically negotiated annually and the rate is based on the number of residents or families, as determined by Census data, in the contracting jurisdiction. For example, Ocean City provides both answering and dispatch services to Upper Township.

The second model is a county-based system in which a county PSAP provides emergency communications services to most or all

municipalities. For example, Burlington County provides answering services for 40 municipalities and dispatch services for most of the towns in the county.

The third model is a partnership or shared governance model in which several municipalities combine answering or dispatch operations. A key feature of this model is joint oversight and management of a combined operation. There are numerous examples of this model in other states, such as Connecticut, Florida, Oregon, and Washington. An example in New Jersey is the joint answering and dispatch center established recently by Bernards Township and Long Hill Township.⁴ Table 8 indicates the consolidation models observed during the site visits.

Key drivers of consolidation are budget pressures and concerns about public safety.

According to some officials, consolidation has often resulted from budget pressure. Several municipalities, seeking to avoid one-time costs of equipment, contracted with a larger town to receive their 9-1-1 calls. Other fee-for-service arrangements evolved over time in response to ever-tightening municipal budgets.

Table 8. Consolidation/Shared Service Models

| PSAP | Type of Consolidation or Shared Service Model |
|---|--|
| Andover Township | Fee-for-Service: Answering and most dispatch for 3 municipalities |
| Burlington County Communications Center | County System: Answering and most dispatch for 40 municipalities |
| Mahwah | Fee-for-Service: Answering and most dispatch for 4 municipalities and Ramapo College |
| Ocean City | Fee-for-Service: Answering and dispatch for Upper Township (Atlantic County) |

⁴ Bernards Township and Long Hill Township were selected to participate in the next phase of the New Jersey 9-1-1 Consolidation Study.

Concerns about public safety also have driven consolidation. At one site, the impetus for a county-based 9-1-1 system came from the tragic death of a police officer due to faulty communications. Following that incident, local jurisdictions joined a larger PSAP both to reduce costs and to improve 9-1-1 communications.

PSAP operators with limited experience with consolidation are more skeptical about prospects for combined operations. Yet, they concede that, if consolidation ever occurs, the driver is likely to be mounting pressure on local budgets.

Perceived benefits of consolidation are efficiency and the opportunity to maintain improved equipment and staff coverage.

Operators who have experience with consolidation cite cost savings and efficiencies as a primary benefit of a consolidated operation. The creation of a countywide 9-1-1 system in Burlington County has reduced duplication of services and has led to demonstrable cost savings, according to PSAP administrators. Because the county fully funds operations and equipment for the communications center, municipalities receive the benefit of 9-1-1 service at minimal or no cost. Other PSAPs point to cost savings and efficiencies achieved through consolidation. Officials at one site indicate that a fee-for-service agreement has cut personnel costs for several municipalities that contract for 9-1-1 services. Officials at another site indicate that combining dispatch operations has resulted in a reduced need to pay overtime to uniformed officers, who in the past were required to cover for absent civilian operators.

Cost savings are not the only perceived benefit. Officials at a jurisdiction with a long history of consolidation assert that their communications center is able to acquire state-of-the-art equipment more readily than smaller jurisdictions can. The center also maintains professional, well-trained personnel that follow uniform procedures for

handling calls and dispatches. Another site indicates that participation in a consolidated center ensures that more trained operators are on duty during every shift. However, some officials caution that the full benefits of consolidation are unlikely to be achieved unless dispatch services are consolidated along with answering services.

Officials without consolidation experience are more skeptical about the potential benefits. Yet, officials at one site admit that combining operations would help them address a persistent problem in recruiting and retaining skilled personnel. Operators at another site suggest that combining operations would improve public safety by enhancing coverage and allowing neighboring police departments to share information and coordinate police activity.

Barriers to consolidation include fears about loss of local autonomy and concerns about maintaining a high quality of service in a consolidated operation.

Interviews with officials who have not pursued consolidation suggest that concerns about home rule are a major barrier to consolidation. As one county coordinator put it, “This is parochial U.S.A.”⁵ Police chiefs and public safety officers fear consolidation because it means a loss of autonomy and a loss of control over their local operations and staff. Some officials view consolidation of 9-1-1 service as the proverbial camel’s nose under the tent—setting the stage for a broader absorption of local police forces under a county police department.

Local officials cite concern about quality assurance as an equally important barrier to consolidation. Officials in several jurisdictions, including those with some experience with consolidation, are reluctant to join a county PSAP because they believe it is not equipped to handle additional call volume or provide high-quality service to municipalities. Operators at one site

⁵ Interview with county 9-1-1 coordinator, October 7, 2005.

even suggest that liability (with the potential for lawsuits) is possible if they switch from a proven local service to an untried countywide operation. Some local officials believe that smaller really is better. They believe consolidation of smaller PSAPs would eliminate staff with knowledge of local terrain and with the capacity to offer “personalized” service. Quality assurance is a concern not only for officials thinking about taking the first steps toward consolidation, but also for officials considering further movement toward consolidation.

Another barrier to consolidation is skepticism about likely cost savings. One jurisdiction conducted a study that found that consolidation of answering and dispatch services would not generate savings. In fact, such a consolidation might increase personnel costs because other staff would be needed to carry out certain duties currently performed by operators and dispatchers. Officials in another PSAP are convinced that consolidation will not generate cost savings unless dispatch services and answering services are both consolidated. A county coordinator suggests another potential barrier. If a jurisdiction has recently purchased new equipment, it will not likely abandon that equipment in order to join a consolidated system.

Factors that will likely encourage jurisdictions to pursue consolidation include financial support, quality assurance, and effective governance arrangements.

Interviews with PSAP officials suggest that financial support is an important factor in overcoming barriers and influencing consolidation. Several local officials indicate that consolidation

is unlikely to move forward unless it is voluntary and if the county agrees to provide full funding for equipment and operations. Other officials believe that financial incentives provided by the state, such as grants or planning assistance, are likely to spur interest in consolidation.

Funding is not the only lever that is needed to overcome barriers to consolidation. Several local officials cite the importance of quality assurance. They need to be assured that services will meet certain standards before they agree to join a county PSAP or an inter-local system. Officials at one site call for specific performance metrics that can be used to measure the quality of answering and dispatch services.

What is also needed is a way to address concerns about governance and control. Officials at one site, reviewing their experience with consolidation, state that little progress can be made without a transparent governance structure, a mission statement, and clear channels for input and feedback from participating jurisdictions. According to these officials, if underlying concerns about governance are dealt with, local jurisdictions will be more likely to embrace consolidation as a way to reduce costs and improve service.

PRELIMINARY RECOMMENDATIONS

The Center for Government Services' 1999 study of New Jersey's 9-1-1 system recommended that state and local governments act decisively to encourage further consolidation. This report lays out new recommendations based on an initial round of site visits, analysis of strategies adopted by other states, and review of New Jersey's current 9-1-1 system.

The recommendations presented in this section, although built on lessons learned from other states, are tailored to address the unique characteristics of New Jersey. Compared with other states that were studied, New Jersey's E9-1-1 system is heavily funded and managed at the local level. Historically, the state has not played a strong role in setting standards, providing equipment, or issuing grants to PSAPs. As a result, the state has little leverage over local operations or funding and limited ability to require or force consolidation.

New Jersey has a layered structure of local government with the dominant role in E9-1-1 activities being played by either counties or municipalities. Over time, some counties have played a strong role in delivering services to multiple municipalities. In other areas of the state, counties have a weak role and municipalities provide most services. New Jersey has a strong tradition of local control and home rule. The state also has a large number of small, relatively affluent communities that have demonstrated a strong preference for locally controlled public safety services and that face few constraints in affording these local services. Given these factors and suspicions about county authority, the most likely consolidation prospect is inter-local consolidation among compatible and contiguous jurisdictions. In limited cases, however, consolidation at the county level is feasible.

Overall Recommendations

As the Heldrich Center study of other states shows,⁶ consolidation is the result of a complex interplay of state policy, local budget pressures, and local political will. It is not the direct result of state policy or state financial incentives. For example, in Minnesota, cuts in state aid to localities and other local budget pressures drove consolidation of E9-1-1 centers in some areas. In Oregon, although state policy encouraged consolidation of the E9-1-1 system, the primary driver was a property tax relief effort that limited the ability of local governments to afford a more decentralized system.

The goal for state policy in New Jersey should be to create an environment conducive to and supportive of local consolidation. Ultimately, consolidation is a local process driven by local elected officials, PSAP administrators, and, to some extent, citizens. To actively and effectively encourage consolidation, New Jersey must focus its resources on local areas that have cooperated in the past and are willing to consider consolidation.

Although incentives are a promising strategy, they are not necessarily sufficient to produce consolidation. For example, although Connecticut has encouraged consolidation with study grants and financial incentives, the state has experienced only a minor reduction in the overall number of PSAPs. Where consolidation has occurred, it is usually the result of budget pressures on local government or a desire for improved emergency communications. In light of this experience, New Jersey policymakers should emphasize a combination of strategies, including incentives, improved data and metrics, public education

⁶ John J. Heldrich Center for Workforce Development, *Reorganizing 9-1-1 Operations: A Report on Experiences with Consolidation in Other States*, October 2005.

and technical assistance, and an enhanced state operational role. Consolidation is most likely to advance where supportive state policy is joined with local champions and local budget pressures.

There is little question state policy should favor combined operations for call taking and dispatch. There is a belief among PSAP operators that forwarding calls for dispatch is inefficient and may actually increase time needed to handle emergency calls. It is also clear that, compared with other states, New Jersey has a large number of secondary dispatch centers. Other states have encouraged consolidation of dispatch and answering functions, usually through financial incentives. For example, Connecticut provides enhanced operational funding to regional centers that provide services for a large population, experience a high call volume, and provide dispatch services for all emergency agencies (police, fire, and emergency medical services).

The following recommendations identify specific action steps the state should consider to promote further consolidation of the E9-1-1 system.

Specific Recommendations: Incentives

- The state should encourage consolidation of PSAPs and PSDPs through application of financial incentives. For example, the state could give funding priority for E9-1-1 consolidation grants to consolidated PSAPs/ PSDPs seeking to upgrade their operations. Funding support may come in the form of direct grants to PSAPs to study, design, and implement consolidation initiatives or to enhance consolidated communication centers.
- Many PSAP operators find it challenging to train their telecommunicators. As an incentive to consolidated call centers, New Jersey could provide training assistance grants to subsidize the training costs and/or staff salaries while a telecommunicator is in training. Alternatively,

the state could subsidize, to some pre-determined level, all training and limit financial support for salaries to inter-local and countywide PSAPs.

- Many E9-1-1 communication centers have recently undergone major facilities and/or equipment upgrades. Any consolidation program needs to include a means to leverage existing investments to assure all participants are able to continue to make use of that technology. To do that, the state should consider providing sufficient financial support to allow a consolidated center to equip itself to the highest common denominator.

Specific Recommendations: Improved Data and Metrics

- To further support efforts to consolidate communication centers, New Jersey, through OETS and with the help of a working group, should develop a set of standards defining high-quality E9-1-1 emergency services. Addressing issues of staffing, equipment, facilities, governance, and accountability, these standards would not only provide a benchmark for local officials pursuing consolidation but would also serve as a best practices guide for all PSAPs.
- To ensure maximum efficiency, any E9-1-1 funding must be tied to requirements that meet the specific technical, operational, and efficiency standards. At a minimum, recipients of state E9-1-1 grants should be required to provide the state regular reports on call volume and costs of operation as a condition of their grant.

Specific Recommendations: Public Education and Technical Assistance

- Third party facilitation should be made available to assist PSAPs with planning and implementation of consolidation.
- The state should consider implementing a structured, phased education program aimed at local officials (administrators, local decision makers, law enforcement officials, PSAP managers, and the public). The education program should be developed and offered by an independent third party, the state, or some combination of the two. The first wave of education efforts should be targeted at local elected officials and public safety officials.

Specific Recommendation: Enhanced State Operational Role

- OETS is a critical partner in New Jersey's E9-1-1 system. While E9-1-1 services remain a largely local/regional service, OETS staff should be tasked with providing support services and education, and developing the standards described in the aforementioned recommendations.

CONCLUSION

This report, summarizing the findings from site visits and interviews with local and county officials, provides a snapshot of local PSAP operations. An overall finding is that each call center is organized, equipped, funded, and staffed to respond to the unique mandates and political realities of the community in which it is located. In most cases, location, available resources, citizens' expectations, local government involvement, and other issues have a direct impact on decisions affecting a call center's organization, staffing, equipment purchases, and level of consolidation.

This report also identifies local officials' perspectives on consolidation of E9-1-1 services, including opportunities and barriers that are strikingly similar to those identified in the Heldrich Center's research on other states' experiences with consolidation. Unlike most states, however, New Jersey's 9-1-1 governance structure favors local control and, as a result, there has been limited progress toward consolidation.

Consolidation, where it has occurred in New Jersey, has happened without any real involvement by the state. This report identifies possible strategies to promote PSAP consolidation. The preliminary recommendations are based on an initial round of site visits, a study of strategies adopted by other states, and an analysis of New Jersey's current E9-1-1 system. The fourth and final report in this study will provide more in-depth recommendations and will build upon the findings outlined in this report and past reports, as well as the results of a second series of site visits and a cost analysis. The cost analysis will utilize data provided by the state and data collected through the E9-1-1 survey of local PSAP and PSDP operators.

APPENDIX A

Eg-1-1 Consolidation Study Interviewees

Chief James Batelli, Mahwah Police Department

Hank Birkenheuer, Camden County 9-1-1 Coordinator

Sergeant S.P. Blank, Mahwah Police Department

Chief Robert Blevin, Ocean City Police Department

Officer Paul Campana, Information Technology Specialist, Cherry Hill Police Department

Brian Campion, Administrator, Warren Township

Lieutenant Peter Casamento, Maywood Borough Police Department

Lieutenant Arthur P. Ceccato, Warren Township Police Department

Chief Phillip Coleman, Andover Township Police Department

Chief James Collins, Hamilton Township Police Department

Eskil Danielson, Director, Sussex County Sheriff's Office

Hal English, Director of Information Technology, Hamilton Township

Chief Anthony Federico, Princeton Borough Police Department

LeRoy Gunzelman III, Somerset County 9-1-1 Coordinator

Robert Hartman, Mercer County 9-1-1 Coordinator

Lieutenant Richard Herrick, 9-1-1 Coordinator, Director of Emergency Management, and Patrol Administration, Hamilton Township Police Department

Kathy Horn, Chief Public Safety Telecommunications Officer, Ocean City Police Department

Jeffrey Johnson, Chief Telecommunicator, Burlington County Communications Center

Lieutenant Anthony Kozlowski, Newton Police Department

Lieutenant Bruce Kuipers, Mahwah Police Department

Lieutenant Mark K. Lepinski, Bergen County 9-1-1 Coordinator

Chief Brian Malloy, Cherry Hill Police Department

Captain Robert Matteucci, North Wildwood Police Department

Frank McCall, Cape May County 9-1-1 Coordinator

Lieutenant Bruce Melson, Services Division Commander, Cherry Hill Police Department

Chief David Pegg, Maywood Police Department

Captain Bruce Richmond, South Amboy Police Department

Lieutenant Datina J. Rinn, Commander, Community Relations Division, Jersey City Police Department

Joseph Saiia, Director, Burlington County Communications Center

Captain Robert Schofield, Cherry Hill Police Department

Sergeant Vicki Skill, North Wildwood Police Department

Michael Somers, Jersey City Police Department

Captain William Stahl, Warren Township Police Department

Jack Terhune, Borough Administrator, Maywood Borough

Raymond Townsend, Administrator, North Wildwood

Sheriff Robert Untig, Sussex County 9-1-1 Coordinator

Captain James Wallis, South Amboy Police Department

Patty Walsh, Lead Public Safety Telecommunicator, Cherry Hill Police Department

Rory Zach, Middlesex County 9-1-1 Coordinator

APPENDIX B

Eg-1-1 Consolidation Study PSAP Selection Criteria New Jersey Office of Information Technology Eg-1-1 Study

Background and Purpose

As part of the Office of Information Technology (OIT) Eg-1-1 Study, the Heldrich Center will conduct in-depth site visits to 12 PSAPs across the state.

The purpose of these site visits is to develop a thorough understanding of local operations, staffing and funding, and key issues affecting consolidation, including the barriers, appropriate incentives, costs, and likely impact on operations. The goal of the site visits is not to draw general conclusions about all PSAPs in the state. Instead, the site visits will provide OIT and the Department of the Treasury with in-depth information on a cross-section of PSAPs that differ by population size, local PSAP structure, geography, and other factors. A detailed description of the methodology and proposed topics will be included in the site visit protocols.

Selection Criteria

The 12 PSAPs have been selected to represent a cross-section of PSAPs in the state. The primary selection criteria for the site visits will be the population base served and the organizational structure of the local PSAP. As Table 9 shows, PSAPs are categorized as large, medium, or small based on the population served. The threshold for identifying a large PSAP is 100,000 and the cut-off for a medium PSAP is 19,000. In addition, the Heldrich Center will select PSAPs that reflect the three current models of PSAP configuration (countywide PSAP, limited-county PSAP operations, and minimal or no county PSAP operations).

Table 9. PSAPs by Population Served

| Category | Definition | Number in State | Number to be Visited |
|----------|---------------|-----------------|----------------------|
| Small | <19,000 | 85 | 6 |
| Medium | 19,001–99,999 | 99 | 4 |
| Large | >100,000 | 15 | 2 |

Note: Excludes the New Jersey State Police, Rutgers, The State University of New Jersey, Kean University, McGuire Air Force Base, and Picatinny Arsenal.

Additional criteria will be used to ensure that selected PSAPs reflect the diversity of New Jersey PSAP operations.

- **Region of the state:** PSAPs will be chosen from different regions in the state (north, central, and south).
- **Scope of operations:** The number of communities served will be considered to ensure a mix of PSAPs that serve a single community and multiple communities.
- **Relationship to dispatch operations:** The relationship between answering and dispatch points will be considered to ensure that some sites with shared and decentralized dispatch are included.

Site Selection

Using the selection criteria and input from project partners including OIT, the Heldrich Center has selected the following PSAPs for site visits. The list of PSAPs is shown below:

One large (100,000+) countywide PSAP operation:

- Burlington County

One large municipal operation (100,000+):

- Jersey City (Hudson)

Four medium operations (19,001 to 99,999):

- Hamilton Township (Mercer)
- Ocean City (Cape May)
- Cherry Hill (Camden)
- Mahwah (Bergen)

Six small operations (19,000 and under):

- Andover Township (Sussex)
- Maywood (Bergen)
- Princeton Borough (Mercer)
- South Amboy (Middlesex)
- North Wildwood (Cape May)
- Warren Township (Somerset)

Table 10 illustrates the selected PSAPs by key selection factors including size, population, and municipalities served.

Table 10. Candidate PSAPs by Key Selection Factors

| PSAP | County | Population | County PSAP Model | Reasons for Leaving Category | Communities Served | PSDPs |
|---|------------|------------|-------------------|------------------------------|--------------------|-------|
| Andover Township | Sussex | 9,911 | No County PSAP | Small | 3 | 0 |
| Burlington County Communications Center | Burlington | 401,141 | Countywide | Large | 40 | 6 |
| Cherry Hill | Camden | 69,965 | Countywide | Medium | 1 | 0 |
| Hamilton Township | Mercer | 87,109 | No County PSAP | Medium | 1 | 0 |
| Jersey City | Hudson | 240,055 | Limited County | Large | 1 | 1 |
| Mahwah | Bergen | 45,763 | Limited County | Medium | 5 | 3 |
| Maywood | Bergen | 9,523 | Limited County | Small | 1 | 0 |
| North Wildwood | Cape May | 4,935 | No County PSAP | Small | 1 | 0 |
| Ocean City | Cape May | 27,493 | No County PSAP | Medium | 3 | 0 |
| Princeton Borough | Mercer | 14,203 | No County PSAP | Small | 1 | 0 |
| South Amboy | Middlesex | 7,913 | No County PSAP | Small | 1 | 0 |
| Warren Township | Somerset | 14,259 | Limited County | Small | 1 | 0 |

Note: Population figures are from the 2004 Census.

APPENDIX C

Eg-1-1 Consolidation Study Site Visit Methodology **New Jersey Office of Information Technology** **Eg-1-1 Study**

Background and Purpose

As part of the Office of Information Technology (OIT) Eg-1-1 Study, the Heldrich Center will conduct in-depth site visits to 12 PSAPs across the state.

The purpose of these site visits is to develop a thorough understanding of local operations, staffing, funding, and key issues affecting consolidation, including the barriers, appropriate incentives, costs, and likely impact on operations. The goal of the site visits is not to draw general conclusions about all PSAPs in the state. Instead, the site visits will provide OIT and the Department of the Treasury with in-depth information on a cross-section of PSAPs that differ by population size, local PSAP structure, geography, and other factors.

Specifically, the site visits will be used to:

- Describe current equipment, technology, staffing, and service patterns of small, medium, and large PSAPs.
- Identify local costs for operating, maintaining, and upgrading small, medium, and large PSAPs.
- Determine perspectives on consolidation, including perceived pros and cons.
- Examine the practicality of setting a minimum threshold for PSAP size (i.e., call volume or population).

Methodology

For each selected PSAP, the Heldrich Center will use the following methodologies:

- Interview with public safety director and Eg-1-1 management responsible for local PSAP.

- Interview with local financial manager.
- Interview with PSAP management and staff responsible for operations.
- Interview with the appropriate county 9-1-1 coordinator.
- Use of standardized templates to gather information on local costs, staffing, equipment, and technology.

Questions for Site Visits

The following topics are expected to be addressed during the site visits to local PSAPs:

Service Patterns

1. What unique factors affect 9-1-1- services in this PSAP?

Probes: Tourists, major road networks, local public expectations of service, geography, economy?
2. How are answering and dispatch coordinated?
3. Do emergency services besides police have input to dispatch?
4. What is the monthly/yearly average of major incidents? How do you define major incident?
5. What is your ability to manage communications for and coordinate response to simultaneous multiple incidents?
6. Have there been negative incidents related to answering or dispatch of a 9-1-1 call?
7. What are your back-up capabilities?

Probes: Mobile Assist equipped, alternate location, pre-wired for calls, radio, telephony, CAD redundancy in place?

8. What are your standard operating procedures governing your PSAP operations including evacuation and degradation?
9. Have the agencies in your jurisdiction begun to implement interoperable radio systems?
10. What are your performance metrics for your local PSAP operation?

Probes: 9-1-1 call answering, call processing time by percentage of inbound calls to dispatch, agency response time, etc.
11. Is your agency's performance data based on your metrics?
12. Refer to templates for questions on call volume.
13. What is the minimum and maximum of 9-1-1 calls you are likely to receive on a given day or shift?
14. Are you currently answering wireless calls? If not, what are your expectations for the volume of wireless calls? What impact might they have on your operation?
15. Have you observed any trends in call volume over time?
16. What is (or has been) the likely impact of wireless calls on the PSAP?

Equipment, Technology, and Facility

1. Refer to checklist for questions on equipment and technology available and being used by the PSAP operation.
2. Is the equipment being used at full capacity? Any unused equipment or technology?
3. Does the PSAP have sufficient capacity to handle additional calls beyond the number being handled now?
4. How is the equipment maintained?

Probes: By contract or in-house staff (FTE or PTE)?
5. What are the strengths or limitations of current equipment and tools?

6. What additional equipment/technology is likely to be needed in the future?
7. Is a staff person at the PSAP responsible for keeping track of new technology that is increasingly becoming available for 9-1-1 services (e.g., VOIP, ACI, etc.)? How does the PSAP manage long-range planning for equipment and technology needs?
8. Is the facility leased or owned? If owned, is it by the city or county?
9. Is the facility adequate for equipment and staffing needs? Is it consistent with NFPA 1221 standards? HVAC? Is it secure? Is there controlled access to the equipment and space?

Personnel and Human Resource Issues

1. What are the chain of command and employment/reporting relationships?

Probes: To what department does the PSAP report? Who supervises the PSAP coordinator? Is that a sworn or non-sworn position?
2. Refer to checklist for questions on number of staff.
3. What is the minimum number of staff on hand at any point during a 24-hour/7-day period?
4. Does the PSAP rely on "forced" or required overtime to provide services?
5. Refer to checklist for questions on other duties unrelated to taking and processing 9-1-1 calls that PSAP staff carry out.
6. Is there sufficient staff capacity to handle additional calls beyond what the PSAP is handling now?
7. What are the hiring requirements—recruitment, selection processes? Any hiring or staff retention problems?

Probes: What is the turnover rate over the past three to five years? How long does it take to have a new hire become a functional PSAP operator? How easy or difficult is it to hire and retain staff?

8. Is the agency/staff unionized?
9. What are the pay scales for the 9-1-1 staff?
10. Are there advancement opportunities for the staff?
11. What are the criteria for substitution of staff (fill in)?
12. Are there current job descriptions and skill requirements available? What is the date of the latest revision? Do employees have copies?
13. Are there ongoing training requirements?
Probes: Of what type—classroom, O-J-T, mentoring, etc.?
14. What are your anticipated training needs?
Probes: Topics, timelines?
15. Is the job of a PSAP operator changing?
Are there new skill requirements related to technology, emergency response, etc.?

Funding and Local Costs

1. What are the revenue sources for your local PSAP operations? Cite all dedicated funds.
2. What are your total operating costs? Minus your dedicated revenue, how much must be covered by other funds?
3. Refer to checklist for the breakdown of staff and operating costs by category. (Employee costs, equipment, maintenance, facility, training, etc.)
4. Have your operating costs increased, decreased, or remained stable recently? Why?
5. How is the PSAP's allocation of state general assistance likely to be used?
6. Does the PSAP receive any allocations of federal homeland security funds?
7. What are your current capital expenditures for PSAP operations? Break down for center or new technology.

8. What are your future or anticipated capital expenditures? Break down for center or new technology.
9. Does the PSAP receive any off-budget support (personnel support from other unit, administrative support from an outside agency)?
10. Has there been any previous experience with shared services?

Perspectives on Consolidation (Answering and Dispatch)

1. Please describe your previous experience with consolidation.
 - a) Does the PSAP have any experience with consolidation or co-location of staff?
 - b) Does the PSAP have any experience with sharing services with another PSAP?
 - c) If there has not been any experience, is consolidation, co-location, or shared services an option that is being considered?

For those with previous experience with consolidation or co-location of staff:

2. Has consolidation involved answering, dispatch, or both?
3. How has consolidation progressed?
Probes: Did it involve a smaller PSAP joining a larger one? Multiple PSAPs forming a new entity? Sharing of resources or services without changing governance? Other?
4. What are the steps? Is co-location of staff a step in the process?
5. What is the timeline for consolidation?
6. Are there opportunities for further consolidation of answering or dispatch services?

7. What is driving local consolidation?
Probes: Is it the local budget? Service improvements or upgrades?
8. What factors enabled consolidation to proceed?
9. What were the barriers or obstacles to consolidation?
Probes: Governance issues? Funding? Union or staffing issues? Public safety concerns?
10. Did you have to change course due to unexpected issues? Please explain.
11. What are the benefits of consolidation or co-location of staff?
Probes: Consider from the standpoint of personnel, equipment/technology, facilities, funding, service, public safety.
12. What are the overall concerns with consolidation or co-location of staff?
Probes: Consider from the standpoint of personnel, equipment/technology, facilities, funding, service, public safety.
13. What have been the results of consolidation?
 - a) Has it led to a reduction in staffing levels?
 - b) Has it led to changes in use of equipment or technology?
 - c) Has it generated cost savings or avoided costs? Any economies of scale or efficiencies?
 - d) Has it affected service? Has it affected public safety?
14. What would have made consolidation easier? Are there specific incentives or assistance that would have speeded up or facilitated consolidation?

15. What are the lessons learned?
Probes: Is there a limit to the amount of consolidation that can take place? Is there a population or call level below that it is not efficient to operate a PSAP?

For those with no previous experience with consolidation or co-location of staff:

16. Are there opportunities for consolidation of 9-1-1 answering and dispatch services?
Probes: What is the most likely scenario? Consolidation with neighboring PSAPs, with the county PSAP; creation of new entity; sharing of services or resources?
17. What is likely to drive local consolidation?
Probes: Local budget? Need for service improvements or upgrades?
18. What are the barriers or obstacles to consolidation?
Probes: Governance issues? Funding? Union or staffing issues? Public safety concerns?
19. What are the likely benefits of consolidation or co-location of staff? In your view, what is the potential for improving service and achieving efficiencies through consolidation?
Probes: Consider from the standpoint of personnel, equipment/technology, facilities, costs/funding, service, and public safety.
20. What are the likely concerns with consolidation or co-location of staff?
Probes: Consider from the standpoint of personnel, equipment/technology, facilities, funding, service, public safety.
21. If consolidation became a likely option, what would be the first steps? How long would it take?
22. What would make consolidation easier to achieve for your jurisdiction? Are there specific incentives that would overcome barriers or lead to consolidation? Is there specific assistance that might be helpful?



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