VIRGINIA E-911 TRAINING

October 24, 2001
Bristol, Virginia

PRESENTED BY THE
VIRGINIA DEPARTMENT OF TECHNOLOGY PLANNING
PUBLIC SAFETY COMMUNICATIONS DIVISION

Table of Contents

Virginia 9-1-1 History....1
A. Local Issue....1
B. General Assembly Activity....1
C. Wireless E-911 Services Board....15
Wireline E-911....22
A. Role of the Wireless Board....22
B. Current Status....22
C. State Funding Guidelines....23
D. Policies Adopted by the Board....26
E. Future Activities....27
Wireless E-911....27
A. Wireless 101....27
B. Current Status....31
C. Roles with Wireless 9-1-1....33
D. State Funding Guidelines....34
E. Funding Request Worksheet....37
F. Submission Instructions....40
G. Approval Process....40
H. Distribution of Funding....40
I. True-up Process....40
J. Amendment of these Guidelines....41
K. Regional Efforts....41
L. Practical Exercises....41
Public Education....42
A. Legislative Mandate....42
B. Making the Right Call....42
C. Future Activities....43
Roundtable Discussion....43

Table of Figures

Figure 1 - House Bill 1331 (1998) - Enrolled....1
Figure 2 - House Joint Resolution 215 (1998) - Enrolled....5
Figure 3 - Item 491.C from the 1999 Budget Document....6
Figure 4 - Senate Bill 148 (2000) – Enrolled (excerpted)....7
Figure 5 - va911.org - Home Page....17
Figure 6 - va911.org - Wireless Board Information....17
Figure 7 - va911.org - Funding Submissions....18
Figure 8 - CMRS Monthly Report....19
Figure 9 - PSAP Contact Listing....20
Figure 10 - Resource Information....20
Figure 11 - About PSC Division....21
Figure 12 - Wireline E-911 Status....22
Figure 13 - Locality Funding by Composite Index Method....25
Figure 14 - Localities impacted by the Capped Composite Method....26
Figure 15 - Call-path Associated Signaling (CAS)....29
Figure 16 - Non Call-path Associated Signaling (NCAS)....29
Figure 17 - Phase II Accuracy and Timing Requirements....30
Figure 18 - Phase I Status....31
Figure 19 - Wireless Funding Received by Locality....32
Figure 20 - Phase II Status....33
Figure 21 - Existing Regional Efforts for Wireless....41

Notes:

Virginia 9-1-1 History

A. Local Issue

Provision of 9-1-1 has historically been a local issue in Virginia. Mandates to provide service are relatively new and still leave the service delivery to the local government. As of July 1, 2001, 112 localities provided wireline enhanced 9-1-1 (E-911) service while 23 did not.

B. General Assembly Activity

(1) Previous Legislation

Prior to 1998, the only pieces of legislation in the *Code of Virginia* regarding 9-1-1 were the enabling legislation for the wireline E-911 surcharge, the authorization for DCJS to provide training standards for dispatchers of law enforcement, and a section in the Good Samaritan Act protecting dispatchers from liability in the provision of medical instructions (EMD).

(2) HB1331 (1998)

Introduced by Del. Keating, HB1331 established the Wireless E-911 Service Board, the Wireless E-911 Surcharge and wireless funding process. The $0.75 surcharge went into effect on July 1, 1998. The original seven member Wireless E-911 Services Board, under the Chairmanship of the Comptroller, first met January 26, 1999. The Board established wireless E-911 funding guidelines and approved funding submissions for FY2000 and FY2001.

Figure 1 - House Bill 1331 (1998) - Enrolled

CHAPTER 165

An Act to amend and reenact § 2.1-1.5 of the Code of Virginia and to amend the Code of Virginia by adding in Chapter 15 of Title 56 an article numbered 6, consisting of sections numbered 56-484.8 through 56-484.11, relating to the Wireless Enhanced Public Safety Telephone Service Act.

[H 1331]

Approved March 16, 1998

Be it enacted by the General Assembly of Virginia:

1. That § 2.1-1.5 of the Code of Virginia is amended and reenacted and that the Code of Virginia is amended by adding in Chapter 15 of Title 56 an article numbered 6, consisting of sections numbered 56-484.8 through 56-484.11, as follows:

Article 6.

Wireless Enhanced Public Safety Telephone Service Act.

§ 56-484.8. Definitions.

As used in this chapter:

"Board" means the Wireless E-911 Service Board created pursuant to this chapter.

"CMRS" means "commercial mobile radio service" as defined in Sections 3 (27) and 332 (d) of the Federal Telecommunications Act of 1996, 47 U.S.C. § 151 et seq., and the Omnibus Budget Reconciliation Act of 1993, Public Law 103-66, 107 U.S.C. § 312. It includes the term "wireless" and service provided by any wireless real time two-way voice communication device, including radio-telephone communications used in cellular telephone service or personal communications service.

"CMRS provider" means an entity authorized by the Federal Communications Commission to provide CMRS service within the Commonwealth of Virginia.

"FCC order" means Federal Communications Commission Order 94-102 (61 Federal Register 40348) and any other FCC order that affects the provision of E-911 service to CMRS customers.

"Public safety answering point" ("PSAP") means a county or municipality that operates a facility equipped and staffed on a twenty-four-hour basis to receive and process 911 service or has notified CMRS providers in its jurisdiction that it intends to operate such a facility.

"Wireless E-911 CMRS costs" means all reasonable direct recurring and nonrecurring capital costs and operating expenses incurred by CMRS providers in designing, upgrading, leasing, purchasing, programming, installing, testing, administering, delivering, or maintaining all necessary data, hardware, software and local exchange telephone service required to provide wireless E-911 service.

"Wireless E-911 fund" means a dedicated fund consisting of all moneys collected pursuant to the wireless E-911 surcharge, as well as any additional funds otherwise allocated or donated to the wireless E-911 fund.

"Wireless E-911 PSAP costs" means all reasonable direct recurring and nonrecurring capital costs and operating expenses incurred by a public service answering point in designing, upgrading, leasing, purchasing, programming, installing, testing, administering, delivering, or maintaining all necessary data, hardware, software and local exchange telephone service required to provide wireless E-911 service and direct personnel costs incurred in receiving and dispatching wireless E-911 calls.

"Wireless E-911 service" means the E-911 service required to be provided by CMRS providers pursuant to the FCC order.

"Wireless E-911 surcharge" means a monthly fee of seventy-five cents assessed upon each CMRS telephone number assigned by a CMRS provider.

§ 56-484.9. Wireless E-911 Service Board.

A. The Wireless E-911 Service Board is hereby created as a body politic and corporate and a political subdivision. The Board shall consist of seven members. Six members shall be appointed by the Governor as follows: one representing the Virginia chapter of the Association of Public Safety Communications Officials, one representing the Virginia chapter of the National Emergency Number Association, one who is the finance officer of a county or municipality, one who is employed by a telephone company providing E-911 service as described in subsection B of § 58.1-3813, and two representing CMRS providers authorized to do business in Virginia. The Comptroller of the Commonwealth shall also be a member of the Board and shall serve as Chairman of the Board.

B. Two of the initial appointments by the Governor shall be for one year, two shall be for two years, and two shall be for three years. Thereafter, all appointments by the Governor shall be for three years except appointments by the Governor to fill vacancies, which shall be for the remainder of the unexpired term. Vacancies shall be filled in the same manner as the original appointment. Each member may be appointed to no more than two successive full terms.

C. Members of the Board shall serve without compensation; however, members of the Board shall be reimbursed for expenses as provided in Chapter 2.1 (§ 2.1-20.2 et seq.) of Title 2.1.

D. The Board may contract for such services as may be necessary to carry out its responsibilities under this chapter. Payment for such services shall be as approved by the Board from funds received from CMRS providers as provided in this chapter. Any information furnished to the Board and designated as confidential by a CMRS provider

Notes:

shall be disclosed only to the Chairman and staff designated by the Chairman to receive such information. Such information may be provided to the Board in combination with other information in such manner that the Board will receive all necessary information without disclosure of confidential information designated by a CMRS provider.

§ 56-484.10. Funding.

A. A wireless E-911 surcharge shall be collected beginning July 1, 1998, by each CMRS provider from each of its customers whose billing address is within the Commonwealth and forwarded to the Board within thirty days.

B. Each CMRS provider shall reduce such collected amounts by three percent and retain such amounts to defray costs incurred in complying with this chapter. Each CMRS provider shall show the wireless E-911 surcharge as a separate item on bills to it customers. If a CMRS provider receives from a customer partial payment of a bill, the CMRS provider shall apply the payment against charges for wireless telephone service before applying any part of the payment to the wireless E-911 surcharge.

C. State and local taxes shall not apply to the wireless E-911 surcharge.

D. Not later than December 1, 2001, the Board shall advise the General Assembly (i) whether the wireless E-911 fund has been sufficient to make qualifying payments on a current basis and (ii) whether there is reason to reduce the amount of the wireless E-911 surcharge.

§ 56-484.11. Uses of wireless E-911 fund.

A. The Board shall provide full payment to PSAP operators of all wireless E-911 PSAP costs and to CMRS providers of all wireless E-911 CMRS costs as defined in this chapter. For that purpose (i) each PSAP operator shall submit to the Board each year on or before October 1 its estimate of wireless E-911 PSAP costs it expects to incur during its next fiscal year and (ii) each CMRS provider shall submit to the Board on or before December 31 of each year its estimate of wireless E-911 CMRS costs it expects to incur during the next fiscal year of counties and municipalities in whose jurisdiction it operates. The Board shall review such estimates and advise each PSAP operator and CMRS provider on or before the following March 1 whether its estimate qualifies for payment hereunder and whether the wireless E-911 fund is expected to be sufficient for such payment during said fiscal year. Each PSAP and CMRS provider shall notify the Board promptly of any material change in its plans to provide wireless E-911 service.

B. The Board shall make such qualifying payments to each PSAP operator and CMRS provider in four equal payments at the beginning of each calendar quarter of such fiscal year. If the wireless E-911 fund is insufficient during any calendar quarter to make all such qualifying payments, the board shall prorate payments equally among all PSAP operators and CMRS providers during such calendar quarter. Unpaid amounts shall be carried forward for payment during the next calendar quarter. Such carry-forward process shall continue until all qualifying payments have been made.

C. During the period July 1 through September 30 of each year the Board shall determine whether qualifying payments to PSAP operators and CMRS providers during the preceding fiscal year exceeded or were less than the actual wireless E-911 PSAP costs or wireless E-911 CMRS costs of any PSAP operator or CMRS provider. Each PSAP operator or CMRS provider shall provide such verification of such costs as may be requested by the Board. Any overpayment shall be refunded to the Board or credited to qualifying payments during the then current fiscal year, on such schedule as the Board shall determine.

D. Any estimate of wireless E-911 PSAP costs submitted to the Board after October 1 and any estimate of wireless E-911 CMRS costs submitted to the Board after December 31 of any year shall be reviewed by the Board as described in subsection A to the extent practicable as determined by the Board; however, qualifying payments based on estimates submitted in accordance with the schedule set forth in subsection A shall have priority for payment.

E. The Board shall review estimates of wireless E-911 PSAP costs or wireless E-911 CMRS costs to be incurred prior to July 1, 1999, and determine whether such costs qualify for payment hereunder. The Board may make such qualifying payments to the extent the wireless E-911 fund is sufficient for such payments.

F. The wireless E-911 fund shall be subject to the provisions of Chapter 14.1 (§ 2.1-234.29 et seq.) of Title 2.1 relating to the Department of the State Internal Auditor.

Notes:

2. That the provisions of this act shall expire on July 1, 2002.

(3) SJ215 (1998)

Introduced by Del. Davies, HJ215 was originally introduced as an alternative to HB1331. The idea was to study the 9-1-1 issue rather than enact a wireless surcharge. The original legislation would have only studied wireless E-911, but the Senate added wireline E-911 to the study resolution. The study was assigned to the Crime Commission, chaired by Sen. Stolle of Virginia Beach. The resulting report made 30 recommendations that including:

- Moving the Board to DTP and hire a Coordinator
- Increasing the membership of the Board
- More clearly defining the roles of the Board and DPSC
- More clearly defining the role of the Board Chairman
- Requiring a statewide strategic plan
- Requiring annual review of the strategic plan
- Requiring the Board to promulgate rules and standards for statewide 9-1-1
- Requiring an annual report to the General Assembly
- Using the same language for allowable wireline costs as was in place for wireless costs
- Requiring the DPSC to develop standards for call accounting
- Adding “direct” and “reasonable” language from wireless cost recovery to wireline.
- Requiring an audit of wireline E-911 funding
- Reducing the administrative fee for collection of the wireline surcharge from 3% to 1%.
- Continuing the wireless surcharge
- Requiring all PSAPs to identify wireless costs in a standard way
- Granting a FIOA exemption to a subcommittee of the Board for CMRS funding reviews
- Continuing “direct” and “reasonable” language for wireless cost recovery
- Reducing the administrative fee for collection of the wireless surcharge from 3% to 1%.
- Repealing of the local wireline surcharge in favor of a $0.75 statewide surcharge.
- Requiring re-evaluation of the wireline surcharge annually
- Maintaining the wireless surcharge at $0.75
- Requiring re-evaluation of the wireless surcharge annually

Notes:

- Designating 9-1-1 as for emergencies and #77 for State Police non-emergencies;
- Allowing the State Police to access the wireless fund for enhanced features on #77;
- Authorizing the replacement of road signs that indicate #77 to be for emergencies;
- Authorizing the DPSC to develop public education programs;
- Requiring all PSAPs to be taking the wireless calls by July 1, 2001 or 2002;
- Requiring all PSAPs to be providing wireline E-911 service by July 1, 2002; and
- Allowing the State Police to access the wireless fund for operating cost in localities that they are the wireless primary PSAP.

Figure 2 - House Joint Resolution 215 (1998) - Enrolled

HOUSE JOINT RESOLUTION NO. 215

Directing the Virginia State Crime Commission to study the wireline and wireless 911 and E-911 systems, the #77 service, and the effect of such calls on state and local public safety agencies.

Agreed to by the House of Delegates, March 12, 1998

Agreed to by the Senate, March 10, 1998

WHEREAS, the 911 and E-911 systems, and the #77 service play a significant role in the delivery of emergency and public safety services to the citizens of the Commonwealth; and

WHEREAS, dialing 911 can summons emergency help when a quick response is critical; and

WHEREAS, the E-911 system, an advanced telecommunications system designed to gather pertinent information about an emergency call, automatically displays the caller's telephone number and location, and a list of the police, fire, and medical agencies serving the geographical area of the call; and

WHEREAS, the list of such police, fire, and medical agencies facilitates the dispatch of emergency services even more quickly; and

WHEREAS, although the 911 and E-911 systems are intended to report emergencies, a growing number of persons use these systems to notify authorities or request help for nonemergency situations, which has contributed to congested 911 and E-911 telephone lines; and

WHEREAS, the implementation of #77 to enable citizens to report urgent, but nonemergency problems would alleviate the burden on the 911 and E-911 systems, and improve the response time, effectiveness, and efficiency of the systems; and

WHEREAS, the increased use of cellular phones and other technological changes affecting the use of the 911 and E-911 services by citizens of the Commonwealth may ultimately result in an increased economic impact on localities; and

WHEREAS, local governments do not have a dedicated revenue source to fund wireless (cellular) 911 calls and face critical financing issues as technology advances; and

WHEREAS, there is currently no uniform method of delivering wireless 911 calls to public safety agencies in the Commonwealth; and

WHEREAS, changing technology requires public safety agencies to re-evaluate the means of delivering the services that are requested of them by citizens who call 911, E-911, and #77; now, therefore, be it

Notes:

RESOLVED by the House of Delegates, the Senate concurring, That the Virginia State Crime Commission be directed to study the wireline and wireless 911 and E-911 systems, the #77 service, and the effect of such calls on state and local public safety agencies. The Commission shall determine (i) which jurisdictions in the Commonwealth do not have wireline and wireless E-911 services and what actions are necessary to provide such service in those jurisdictions; (ii) the impact of federal regulations in the Federal Communications Commission docket order 94-102 on localities; (iii) the impact of wireless 911 services on the Department of State Police; (iv) the management of wireless 911 calls in other states; (v) the impact of the wireless 911 and E-911 systems on the wireline 911 and E-911 systems; (vi) the most efficient funding mechanisms for wireline and wireless 911 and E-911 systems; (vii) the extent to which common management of the wireline and wireless 911 and E-911 systems can maximize the economic and operational efficiencies of both systems; and (viii) the current volume of 911, E-911, #77, and wireless 911 calls in the Commonwealth and the projected volume through the year 2005.

The Commission shall recommend (i) how to improve the 911 and E-911 systems, and ways to promote the use of #77 among citizens for nonemergency services, (ii) how to provide wireline and wireless E-911 services in jurisdictions that do not have such service, (iii) ways to mitigate the economic impact on localities of complying with the Federal Communications Commission docket order 94-102, (iv) how to fund most efficiently the wireline and wireless 911 and E-911 systems, and (v) how to manage any increased responsibility that the Department of State Police may incur due to an increase in the volume of 911, E-911, and #77 calls.

The Commission shall consult with the Department of State Police, the State Corporation Commission, the Department of Emergency Services, and the Office of the Attorney General in conducting this study.

The Commission shall complete its work in time to submit its findings and recommendations to the Governor and the 2000 Session of the General Assembly as provided in the procedures of the Division of Legislative Automated Systems for the processing of legislative documents.

(4) 1999 Budget Amendment

Though only halfway through the Crime Commission study, spurred by concerns that wireless 9-1-1 was overwhelming the State Police communications centers, the General Assembly adds budget language that required nine localities (3 in the Richmond area, 6 in the Tidewater area) to begin accepting the wireless 9-1-1 calls directly.

Figure 3 - Item 491.C from the 1999 Budget Document

Item 491. C

C.1. It is the intent of the General Assembly that wireless 911 calls be delivered directly by the Commercial Mobile Radio Service (CMRS) provider to the local Public Safety Answering Point (PSAP), in order that such calls be answered by the local jurisdiction within which the call originates, thereby minimizing the need for call transfers whenever possible.

2. Notwithstanding the provisions of Article 6 (§56-484.8 et seq.), Chapter 15, Title 56, Code of Virginia, the Department of State Police is authorized to receive moneys collected in the Wireless E-911 Fund, not to exceed $750,000 in each fiscal year, to offset dispatch center operating costs incurred for answering wireless 911 telephone calls originating in localities for which the Department of State Police continues to serve as the PSAP for wireless 911 telephone calls. Such payments shall be made pursuant to procedures established by the Wireless E-911 Service Board.

Notes:

(5) SB148 (2000)

Sen. Stolle introduced SB148 to address the findings of Crime Commission study mandated by HJ215. The final legislation was radically than that which was introduced. The enacted legislation:

- moved the Board to the Department of Technology Planning (DTP);
- expanded the membership of the Board;
- created a subcommittee of the Board to review CMRS cost recovery submission;
- included CMRS data in the exclusions from FOIA;
- established deadlines for the implementation of wireline E-911 and wireless 9-1-1;
- created the Division of Public Safety Communications in DTP;
- capped the wireline E-911 surcharge at $3.00; and
- requires the wireline E-911 surcharge revenue to be track separately and audited.

Figure 4 - Senate Bill 148 (2000) – Enrolled (excerpted)

CHAPTER 1064

An Act to amend and reenact §§ 2.1-342.01, 2.1-344, 8.01-225, 9-6.25:2 as it is currently effective and as it may become effective, 58.1-3812 and 58.1-3814 of the Code of Virginia; to amend the Code of Virginia by adding in Chapter 35.2 of Title 2.1 an article numbered 7.2, consisting of a section numbered 2.1-563.35:4; by adding in Chapter 15 of Title 56 an article numbered 7, consisting of sections numbered 56-484.12 through 56-484.17; by adding § 58.1-3813.1; and to repeal §§ 56-484.8 through 56-484.11 and 58.1-3813 of the Code of Virginia, relating to the Enhanced Public Safety Telephone Services Act.

[S 148]

Approved May 19, 2000

Be it enacted by the General Assembly of Virginia:

1. That §§ 2.1-342.01, 2.1-344, 8.01-225, 9-6.25:2 as it is currently effective and as it may become effective, 58.1-3812 and 58.1-3814 of the Code of Virginia are amended and reenacted and that the Code of Virginia is amended by adding in Chapter 35.2 of Title 2.1 an article numbered 7.2, consisting of a section numbered 2.1-563.35:4; by adding in Chapter 15 of Title 56 an article numbered 7, consisting of sections numbered 56-484.12 through 56-484.17; and by adding § 58.1-3813.1 as follows:

§ 2.1-342.01. Exclusions to application of chapter.

A. The following records are excluded from the provisions of this chapter but may be disclosed by the custodian in his discretion, except where such disclosure is prohibited by law:

…

71. Trade secrets, as defined in the Uniform Trade Secrets Act (§ 59.1-336 et seq.) of Title 59.1, submitted by CMRS providers as defined in § 56-484.12 to the Wireless Carrier E-911 Cost Recovery Subcommittee created pursuant to § 56-484.15, relating to the provision of wireless E-911 service.

…

§ 2.1-344. Closed meetings authorized for certain limited purposes.

A. Public bodies may hold closed meetings only for the following purposes:

…

Notes:

27. Discussion or consideration, by the Wireless Carrier E-911 Cost Recovery Subcommittee created pursuant to § 56-484.15, of trade secrets, as defined in the Uniform Trade Secrets Act (§ 59.1-336 et seq.) of Title 59.1, submitted by CMRS providers as defined in § 56-484.12, related to the provision of wireless E-911 service

…

Article 7.2.

Division of Public Safety Communications.

§ 2.1-563.35:4. Division of Public Safety Communications established; appointment of Virginia Public Safety Communications Systems Coordinator; duties of Division.

A. There is hereby established within the Department of Technology Planning, a Division of Public Safety Communications (the Division) which shall be headed by a Virginia Public Safety Communications Systems Coordinator, appointed by the Director of the Department of Technology Planning (the Director) with the advice and consent of the Wireless E-911 Services Board. The Division shall consist of no less than three employees, including one attorney, one telecommunications engineer and one analyst, and such other personnel as the Director deems necessary. The salaries of the employees of the Division shall be paid from the Wireless E-911 Fund created pursuant to § 56-484.17.

B. The Division shall provide staff support to the Wireless E-911 Services Board and encourage, promote and assist in the development and deployment of statewide enhanced emergency telecommunications systems.

§ 8.01-225. Persons rendering emergency care, obstetrical services exempt from liability.

A. Any person who:

…

Any person serving without compensation as a dispatcher for any licensed public or nonprofit emergency services agency in this Commonwealth shall not be liable for any civil damages for any act or omission resulting from the rendering of emergency services in good faith by the personnel of such licensed agency unless such act or omission was the result of such dispatcher's gross negligence or willful misconduct.

…

Any licensed physician serving without compensation as a medical advisor to an E-911 system in this Commonwealth shall not be liable for any civil damages for any act or omission resulting from rendering medical advice in good faith to establish protocols to be used by the personnel of the E-911 ~~system~~ *service*, as defined in § ~~58.1-3813~~ *58.1-3813.1*, when answering emergency calls unless such act or omission was the result of such physician's gross negligence or willful misconduct.

…

D. Any provider of telecommunication service, as defined in § 58.1-3812, including mobile service, in this Commonwealth shall not be liable for any civil damages for any act or omission resulting from rendering such service with or without charge related to emergency calls unless such act or omission was the result of such service provider's gross negligence or willful misconduct.

…

Article 7.

Enhanced Public Safety Telephone Services Act.

§ 56-484.12. Definitions.

As used in this article, unless the context requires a different meaning:

"Automatic location identification" or "ALI" means a telephone network capability that enables the automatic display of information defining the geographical location of the telephone used to place a wireless 9-1-1 call.

Notes:

"Automatic number identification" or "ANI" means a telephone network capability that enables the automatic display of the telephone number used to place a wireless 9-1-1 call.

"Board" means the Wireless E-911 Services Board created pursuant to this article.

"Coordinator" means the Virginia Public Safety Communications Systems Coordinator employed by the Division.

"CMRS" means "commercial mobile radio service" as defined in Sections 3 (27) and 332 (d) of the Federal Telecommunications Act of 1996, 47 U.S.C. § 151 et seq., and the Omnibus Budget Reconciliation Act of 1993, Public Law 103-66, 107 U.S.C. § 312. It includes the term "wireless" and service provided by any wireless real time two-way voice communication device, including radio-telephone communications used in cellular telephone service or personal communications service.

"CMRS provider" means an entity authorized by the Federal Communications Commission to provide CMRS service within the Commonwealth of Virginia.

"Director" means the Director of the Department of Technology Planning.

"Division" means the Division of Public Safety Communications Systems.

"Enhanced 9-1-1 service" or "E-911" means a service consisting of telephone network features and PSAPs provided for users of telephone systems enabling such users to reach a PSAP by dialing the digits "9-1-1." Such service automatically directs 9-1-1 emergency telephone calls to the appropriate PSAPs by selective routing based on the geographical location from which the emergency call originated and provides the capability for ANI and ALI features.

"FCC order" means Federal Communications Commission Order 94-102 (61 Federal Register 40348) and any other FCC order that affects the provision of E-911 service to CMRS customers.

"Local exchange carrier" means any public service company granted a certificate to furnish public utility service for the provision of local exchange telephone service pursuant to Chapter 10.1 (§ 56-265.1 et seq.) of Title 56.

"Public safety answering point" (PSAP) means a facility (i) equipped and staffed on a twenty-four-hour basis to receive and process E-911 calls or (ii) that intends to receive and process E-911 calls and has notified CMRS providers in its jurisdiction of its intention to receive and process such calls.

"Wireless E-911 CMRS costs" means all reasonable, direct recurring and nonrecurring capital costs and operating expenses incurred by CMRS providers in designing, upgrading, leasing, purchasing, programming, installing, testing, administering, delivering, or maintaining all necessary data, hardware, software and local exchange telephone service required to provide wireless E-911 service, which have been sworn to by an authorized agent of a CRMS provider.

"Wireless E-911 fund" means a dedicated fund consisting of all moneys collected pursuant to the wireless E-911 surcharge, as well as any additional funds otherwise allocated or donated to the wireless E-911 fund.

"Wireless E-911 PSAP costs" means all reasonable direct recurring and nonrecurring capital costs and operating expenses incurred by a PSAP in designing, upgrading, leasing, purchasing, programming, installing, testing, administering, delivering, or maintaining all necessary data, hardware, software and local exchange telephone service required to provide wireless E-911 service and direct personnel costs incurred in receiving and dispatching wireless E-911 emergency telephone calls, which have been sworn to by an authorized agent of the PSAP.

"Wireless E-911 service" means the E-911 service required to be provided by CMRS providers pursuant to the FCC order.

"Wireless E-911 surcharge" means a monthly fee of seventy-five cents assessed upon each CMRS telephone number assigned by a CMRS provider.

§ 56-484.13. Wireless E-911 Services Board; membership; terms; compensation.

A. The Wireless E-911 Services Board is hereby created, which shall promote and assist in the statewide development, deployment, and maintenance of enhanced wireless

Notes:

emergency telecommunications services and technologies. The Board shall similarly promote and assist in the development and deployment of enhanced wireline emergency telecommunications services and technologies only in specific local jurisdictions that are not currently wireline E-911 capable. The Board shall exercise the powers and duties conferred in this article.

B. The Board shall consist of fourteen members as follows: the Director of the Department of Technology Planning, who shall serve as chairman of the Board; the Comptroller, who shall serve as the treasurer of the Board; and the following twelve members to be appointed by the Governor: one member representing the Virginia Department of Emergency Services, one member representing the Virginia State Police, one member representing a local exchange carrier providing E-911 service in Virginia, two members representing wireless service providers authorized to do business in Virginia, two county, city or town PSAP directors or managers, one Virginia sheriff, one chief of police, one fire chief, one emergency medical services manager, and one finance officer of a county, city, or town.

C. Initial appointments to the Board shall be for the following terms: four members shall serve five-year terms, four members shall serve four-year terms, and four members shall serve three-year terms. Thereafter, all members appointed by the Governor shall serve five-year terms. The Director of the Department of Technology Planning and the Comptroller shall serve terms coincident with their terms of office. No gubernatorial appointee shall serve more than two consecutive terms.

D. A majority of the Board shall constitute a quorum. The Board shall hold its first meeting on or before October 1, 2000, and shall meet at least monthly through June 2002, and at least quarterly thereafter, or at the call of its chairman.

E. Members of the Board shall serve without compensation; however, members of the Board shall be reimbursed for expenses as provided in Chapter 2.1 (§ 2.1-20.2 et seq.) of Title 2.1.

F. The Geographic Information Network Division and the Virginia Department of Transportation shall provide such technical advice as the Board requires.

§ 56-484.14. Powers and duties of Wireless E-911 Services Board.

The Board shall have the power and duty to:

1. Make and enter into all contracts and agreements necessary or incidental to the performance of its duties and the execution of its powers, including purchase agreements payable from (i) the Wireless E-911 Fund and (ii) other moneys appropriated for the provision of enhanced wireline emergency telecommunications services only in specific local jurisdictions that are not wireline E-911 capable as of July 1, 2000.

2. Pursue all legal remedies to enforce any provision of this article, or any contract entered into pursuant to this article.

3. Develop a comprehensive, enhanced wireless emergency telecommunications plan for implementing statewide enhanced wireless emergency telecommunications services. In constructing and periodically updating this plan as appropriate, the Board shall monitor trends and advances in enhanced wireless emergency telecommunications technology, plan and forecast future needs for enhanced wireless emergency telecommunications technology, and formulate strategies for the efficient and effective delivery of enhanced wireless emergency telecommunications services.

4. Develop and adopt regulations, in accordance with the Administrative Process Act (§ 9-6.14:1 et seq.), for funding enhanced wireless emergency telecommunication services in the Commonwealth.

5. Grant such extensions of time for compliance with the provisions of § 56-484.16 as the Board deems appropriate.

6. Take all steps necessary to inform the public of the use of the digits "9-1-1" as the designated emergency telephone number and the use of the digits "#-7-7" as a designated nonemergency telephone number.

7. Report annually to the Governor, the Senate Committee on Finance and the House Committee on Appropriations, and the Virginia State Crime Commission on (i) the state of enhanced wireless emergency telecommunications services in the Commonwealth,

Notes:

(ii) the impact of, or need for, legislation affecting enhanced wireless emergency telecommunications services in the Commonwealth, (iii) the need for changes in the Wireless E-911 funding mechanism as appropriate, and (iv) the sufficiency of other moneys appropriated for the provision of enhanced wireline emergency telecommunications services only in those local jurisdictions not wireline capable as of July 1, 2000.

8. Provide advisory technical assistance to PSAPs and state and local law enforcement, and fire and emergency medical service agencies, upon request.

9. Collect, distribute, and withhold moneys from the Wireless E-911 Fund as provided in this article.

10. Manage other moneys appropriated for the provision of enhanced wireline emergency telecommunications services only in specific local jurisdictions that are not wireline E-911 capable as of July 1, 2000.

11. Perform all acts necessary, convenient or desirable to carrying out the purposes of this article.

§ 56-484.15. Wireless Carrier E-911 Cost Recovery Subcommittee established.

A. There is hereby established a Wireless Carrier E-911 Cost Recovery Subcommittee of the Board. The Subcommittee shall (i) meet only to determine whether costs submitted by CMRS providers are reasonable and direct to the provision of wireless E-911 service and (ii) review only those documents necessary to determine whether costs submitted by CMRS providers are reasonable and direct to the provision of wireless E-911 service.

B. The Subcommittee shall consist of the following six members from the Board: the representative of the Virginia State Police; the two PSAP directors or managers; the finance officer of a county, city or town; the Director of the Department of Technology Planning, who shall serve as the Subcommittee's chairman; and the Comptroller.

C. Staff to the Subcommittee shall be provided by the Division of Public Safety Communications created pursuant to § 2.1-563.35:4.

D. Unless otherwise ordered by a court of competent jurisdiction, no member or staff of the Subcommittee shall release or disclose the contents of documents used to determine whether costs submitted by CMRS providers are reasonable and direct to the provision of wireless E-911 service.

§ 56-484.16. Local emergency telecommunications requirements; use of digits "9-1-1."

A. All county, city or town PSAPs that as of July 1, 2000, are operating a wireline E-911 system and capable of receiving wireless 911 calls directly shall begin answering wireless 911 and E-911 calls no later than July 1, 2002, unless an extension of time has been granted by the Board. All other county, city or town PSAPs shall begin answering and responding to wireless 911 and E-911 calls no later than July 1, 2003, unless an extension of time has been granted by the Board. The digits "9-1-1" shall be the designated wireless emergency telephone number in Virginia. No public safety agency shall advertise or otherwise promote the use of any telephone number for emergency response services other than "9-1-1."

B. On or before July 1, 2003, every county, city or town in the Commonwealth shall be operating a wireline E-911 system, unless an extension of time has been granted by the Board.

C. The digits "9-1-1" shall be the designated emergency telephone number in Virginia. No public safety agency shall advertise or otherwise promote the use of any number for emergency response service other than "9-1-1."

§ 56-484.17. Wireless E-911 Fund; uses of Fund; enforcement; audit required.

A. There is hereby created in the state treasury a special nonreverting fund to be known as the Wireless E-911 Fund (the Fund). The Fund shall be established on the books of the Comptroller. Interest earned on moneys in the Fund shall remain in the Fund and be credited to it. Any moneys remaining in the Fund, including interest thereon, at the end of each fiscal year shall not revert to the general fund but shall remain in the Fund. Except as provided in § 2.1-563.35:4, moneys in the Fund shall be used solely for the purposes stated in subsections C through F. Expenditures and disbursements from the

Notes:

Fund shall be made by the State Treasurer on warrants issued by the Comptroller upon written request signed by the Director.

B. Each CMRS provider shall collect a wireless E-911 surcharge from each of its customers whose billing address is within the Commonwealth. All wireless E-911 surcharges shall be remitted within 30 days to the Board for deposit in the Fund. Each CMRS provider shall reduce collected surcharge amounts to the minimum amount necessary to defray costs of collecting the surcharges, not to exceed three percent of the amount collected. State and local taxes shall not apply to the wireless E-911 surcharge.

C. The Board shall provide full payment to PSAP operators for all wireless E-911 PSAP costs and to CMRS providers of all wireless E-911 CMRS costs. For these purposes (i) each PSAP operator shall submit to the Board on or before October 1 of each year, an estimate of wireless E-911 PSAP costs it expects to incur during its next fiscal year and (ii) each CMRS provider shall submit to the Board on or before December 31 of each year an estimate of wireless E-911 CMRS costs it expects to incur during the next fiscal year of counties and municipalities in whose jurisdiction it operates. The Board shall review such estimates and advise each PSAP operator and CMRS provider on or before the following March 1 whether its estimate qualifies for payment hereunder and whether the Wireless E-911 Fund is expected to be sufficient for such payment during said fiscal year. Each PSAP operator and CMRS provider shall notify the Board promptly of any material change in its plans to provide wireless E-911 service.

D. The Board shall make such qualifying payments to each PSAP operator and CMRS provider in four equal payments at the beginning of each calendar quarter of such fiscal year. If the Wireless E-911 Fund is insufficient during any calendar quarter to make all such qualifying payments, the Board shall prorate payments equally among all PSAP operators and CMRS providers during such calendar quarter. Unpaid amounts shall be carried forward for payment during the next calendar quarter. Such carry-forward process shall continue until all qualifying payments have been made.

E. During the period July 1 through September 30 of each year, the Board shall determine whether qualifying payments to PSAP operators and CMRS providers during the preceding fiscal year exceeded or were less than the actual wireless E-911 PSAP costs or wireless E-911 CMRS costs of any PSAP operator or CMRS provider. Each PSAP operator or CMRS provider shall provide such verification of such costs as may be requested by the Board. Any overpayment shall be refunded to the Board or credited to qualifying payments during the then current fiscal year, on such schedule as the Board shall determine.

F. Any estimate of wireless E-911 PSAP costs submitted to the Board after October 1 and any estimate of wireless E-911 CMRS costs submitted to the Board after December 31 of any year shall be reviewed by the Board as described in subsection A to the extent practicable as determined by the Board; however, qualifying payments based on estimates submitted in accordance with the schedule set forth in subsection A shall have priority for payment.

G. CMRS providers and PSAPs found by the Board to be using the Wireless E-911 Fund moneys for purposes other than those authorized by the Board shall be provided with written notice by the Board of such unauthorized expenditures. Upon receipt of the notice, the named CMRS provider or PSAP shall cease making any expenditure involving Wireless E-911 Fund moneys identified by the Board as unauthorized. The CMRS provider or PSAP may petition and shall receive a hearing before the Board within a reasonable time. At the Board's discretion, the CMRS provider or PSAP shall be required to refund within ninety days any Wireless E-911 Fund moneys spent on unauthorized expenditures to the Board for deposit into the Wireless E-911 Fund. CMRS providers or PSAPs who fail to cease making unauthorized expenditures or fail to comply with a request to refund Wireless E-911 Fund moneys shall be subject to a suspension of future Wireless E-911 funding by the Board until such time as they comply with all provisions of this article. Any action of the Board made pursuant to this section shall be subject to appeal to the circuit court in which the CMRS provider or PSAP is located, or to the Circuit Court for the City of Richmond.

H. The Auditor of Public Accounts, or his legally authorized representatives, shall annually audit the Wireless E-911 Fund. The cost of such audit shall be borne by the Board and be payable from the Wireless E-911 Fund, as appropriate. The Board shall furnish copies of the audits to the Governor, the Public Safety Subcommittees of the

Notes:

Senate Committee on Finance and the House Committee on Appropriations, and the Virginia State Crime Commission.

§ 58.1-3812. Telegraph and telephone companies.

…

§ 58.1-3813.1. Local tax for enhanced 911 service; definitions.

A. As used in this section and § 58.1-3813.2, unless context requires a different meaning:

"Automatic location identification" or "ALI" means a telephone network capability that enables the automatic display of information defining the geographical location of the telephone used to place a wireline 9-1-1 call.

"Automatic number identification" or "ANI" means a telephone network capability that enables the automatic display of the telephone number used to place a wireline 9-1-1 call.

"Board" means the Wireless E-911 Services Board established pursuant to § 56-484.13.

"Enhanced 9-1-1 service" or "E-911" means a service consisting of telephone network features and PSAPs provided for users of telephone systems enabling such users to reach a PSAP by dialing the digits "9-1-1." Such service automatically directs 9-1-1 emergency telephone calls to the appropriate PSAPs by selective routing based on the geographical location from which the emergency call originated and provides the capability for ANI and ALI features.

"Local exchange carrier" means any public service company granted a certificate to furnish public utility service for the provision of local exchange telephone service pursuant to Chapter 10.1 (§ 56-265.1 et seq.) of Title 56.

"Public safety answering point" or "PSAP" means a communications facility equipped and staffed on a twenty-four-hour basis to receive and process 911 calls.

B. Any county, city or town which has, singly or by joint agreement, established or will establish an enhanced 911 service may impose a special tax on the consumers of the telephone service or services provided by any corporation subject to the provisions of Chapter 26 (§ 58.1-2600 et seq.) of this title, not to exceed a monthly fee of three dollars. However, no such tax shall be imposed on federal, state and local government agencies. Such tax shall be subject to the notification and jurisdictional provisions of § 58.1-3812.

C. The governing body of any county, city or town may exempt from payment of the tax any subscriber to individual telephone service who resides in a nursing home or similar adult care facility.

D. Prior to imposing such tax, the governing body of any city, town or county shall find that an enhanced 911 service, as defined in subsection A, has been or will be installed in its respective locality and that the telephone company has central office equipment which will permit such system to be established.

E. For the purpose of compensating a telephone utility for accounting for and remitting the tax levied by this section, such telephone utility shall be allowed three percent of the amount of tax due and accounted for in the form of a deduction in submitting the return and paying the amount due by it.

F. Any such taxes imposed by this section shall be accounted for in a separate special revenue fund or accounted for using a cost center and revenue accounting system acceptable to the Auditor of Public Accounts. The locality shall report revenues, expenditures, and balances of the E-911 special revenue fund or cost center in accordance with the specifications set forth in section § 15.2-2510. Amounts collected from the tax shall be used solely to pay for reasonable, direct recurring and nonrecurring capital costs, and operating expenses incurred by a public safety answering point in designing, upgrading, leasing, purchasing, programming, installing, testing, administering, delivering, or maintaining all necessary data, hardware and software required to receive and process emergency telephone calls through an E-911 system, including salaries and fringe benefits of dispatchers and direct call-takers of an E-911 system and costs incurred in training dispatchers and direct call-takers in receiving and dispatching emergency telephone calls, and the salary and fringe benefits of the public

Notes:

safety answering point director or coordinator so long as such person has no other duties other than the responsibility for the public safety answering point.

G. Localities shall ensure that the audit contract with their independent certified public accountant includes audit procedures, in accordance with the specifications set forth in § 15.2-2511, of the separate special revenue fund or cost center required to be established for receiving and accounting for amounts collected under the tax authorized by this section. The specifications shall require an annual audit, beginning July 1, 2000, of such fund or cost center so as to ensure that the amounts collected from such tax are expended solely to pay wireline PSAP cost as defined in this article. The independent certified public accountants shall report any findings to the Auditor of Public Accounts by November 30 following the fiscal year end. The Auditor of Public Accounts shall summarize findings from all localities and report those findings annually to the Governor, the Senate Committee on Finance and the House Committee on Appropriations, and the Virginia State Crime Commission by February 1 of the next year.

§ 58.1-3814. Water or heat, light and power companies.

…

2. That until October 1, 2000, the Wireless E-911 Board, created pursuant to § 56-484.9, shall continue to administer the provisions of the Wireless Enhanced Public Safety Telephone Service Act, including the receipt and deposit of wireless E-911 surcharges, notwithstanding the creation of the Wireless E-911 Services Board in this act. On October 1, 2000, the responsibility for the administration of the Wireless Enhanced Public Safety Telephone Service Act or any successor statute shall be transferred to the Wireless E-911 Services Board, created by this act, in accordance with the provisions of this act. The Wireless E-911 Services Board created by this act shall honor all agreements to which the Wireless E-911 Board, created pursuant to § 56-484.9, is a party.

3. That §§ 56-484.8 through 56-484.11 and 58.1-3813 of the Code of Virginia are repealed.

(6) HB1611 (2001)

Introduced by Del. Deeds, HB1611 removed the requirement to implement wireline E-911 from any locality that:

1) does not have a local wireline E-911 surcharge, and;
2) is less than 50% covered by wireless telephone service.

CHAPTER 713

An Act to amend and reenact § 56-484.16 of the Code of Virginia, relating to local emergency telecommunications requirements.

[H 1611]

Approved March 26, 2001

Be it enacted by the General Assembly of Virginia:

1. That § 56-484.16 of the Code of Virginia is amended and reenacted as follows:

§ 56-484.16. Local emergency telecommunications requirements; use of digits "9-1-1."

A. *Except as provided in subsection D,* all county, city or town PSAPs that as of July 1, 2000, are operating a wireline E-911 system and capable of receiving wireless 911 calls directly shall begin answering wireless 911 and E-911 calls no later than July 1, 2002, unless an extension of time has been granted by the Board. *Except as provided in subsection D,* all other county, city or town PSAPs shall begin answering and responding to wireless 911 and E-911 calls no later than July 1, 2003, unless an extension of time has been granted by the Board. The digits "9-1-1" shall be the designated wireless emergency telephone number in Virginia. No public safety agency shall advertise or

Notes:

otherwise promote the use of any telephone number for emergency response services other than "9-1-1."

B. *Except as provided in subsection D,* on or before July 1, 2003, every county, city or town in the Commonwealth shall be operating a wireline E-911 system, unless an extension of time has been granted by the Board.

C. The digits "9-1-1" shall be the designated emergency telephone number in Virginia. No public safety agency shall advertise or otherwise promote the use of any number for emergency response service other than "9-1-1."

D. The provisions of this section shall not apply to any county, city, or town in which (i) fifty percent or more of the locality's geographic area is unable to receive wireless telephone service; (ii) no taxes are imposed for E-911 services pursuant to § 58.1-3813.1; and (iii) the Board has designated a specific PSAP or the Virginia State Police to answer wireless 911 and wireless E-911 calls originating in the particular locality, and the designated entity agrees to answer wireless 911 and wireless E-911 calls.

C. Wireless E-911 Services Board

(1) Progress to date

Since being constituted in October 2000, the new Wireless E-911 Services Board (the Board) has met monthly as required by the *Code of Virginia*. During that time, the Board has:

- conducted the audit of FY2000 funding provided by the previous Board (22 localities, 7 wireless service providers);
- approved eight adjustments to FY2001 funding requests;
- approved 57 PSAPs for FY2002 funding (approximately $7.6 million);
- approved nine wireless service providers for FY2002 funding;
- is currently processing the audit of FY2001 funding received by the localities and wireless
- service providers;
- drafted guidelines for both the Wireline and the Wireless E-911 grant process;
- conducted Phase I status reviews with each major wireless service provider in the Commonwealth; and
- approved guidelines for Phase II funding for PSAPs and wireless service providers.

(2) Board Members

N. Jerry Simonoff
Chairman
Virginia Dept. of Tech. Planning
110 South Seventh Street, Suite 135
Richmond, Virginia 23219-3931
(804) 225-3622
jsimonoff@dtp.state.va.us

James M. McDonnell, Jr.
Vice-Chairman

Notes:

Post Office Box 40
Chesterfield, Virginia 23832
(804) 751-4314
mcdonnellj@co.chesterfield.va.us

William E. Landsidle
Treasurer
Virginia Department of Accounts
101 North 14th Street
Richmond, Virginia 23219
(804) 225-2109
wlandsidle@doa.state.va.us

Melvin Breeden
3654 Airport Acres Road
Charlottesville, Virginia 22911
(804) 296-5855
mbreeden@albemarle.org

Edward Coglio
2216 Magnolia Street
Richmond, Virginia 23223
(804) 819-5001
ecogli01@sprintspectrum.com

Captain John Furlough
7700 Midlothian Turnpike
Richmond, Virginia 23225
(804) 674-2044
jfurlough@vsp.state.va.us

D. Terry Hall
301 Goodwin Neck Road
Yorktown, Virginia
(757) 890-3620
hallt@co.york.va.us

Thomas A. Hanson
2306 Ivy Road
Charlottesville, VA 22903
(804) 971-1765
hanson@ci.charlottesville.va.us

Ralph Jones
10501 Trade Court
Richmond, VA 23236
(804) 897-9500 x6579
lrjones@vdem.state.va.us

Chief Henry Stanley
Post Office Box 27032
Richmond, Virginia 23273

Notes:

(804) 501-4840
sta@co.henrico.va.us

Sheriff Ron D. Oakes
Post Office Box 916
Wise, Virginia 24293-0916
(540) 328-9647
sheriff@wiseso.org

Chief Julian H. Taliaferro
203 Ridge Street
Charlottesville, Virginia 22902
(804) 970-3240
taliafer@ci.charlottesville.va.us

Robert W. Woltz, Jr.
600 East Main Street, 11th Floor
Richmond, Virginia 23219
(804) 772-1595
robert.w.woltz.jr@verizon.com

(3) Board Website (va911.org)

Figure 5 - va911.org - Home Page

The va911.org website contains a great deal of information regarding E-911 in Virginia and the activities of the Wireless E-911 Service Board.

Figure 6 - va911.org - Wireless Board Information

Notes:

All of the minutes of the Wireless E-911 Services Board are posted on the site. Additionally, the agendas for upcoming meetings are posted at least a week prior to each scheduled meeting. Wireless funding guidelines and all necessary forms are available. The site is currently being expanded to include the ability to complete a funding submission online. No forms will be necessary.

The CMRS monthly reports are required from each wireless provider and posted for public review. The reports detail the provider's activities with the provision of service. Occasional review of these reports can help identify inconsistencies between your understanding of the current status of your implementation and the report status.

Figure 7 - va911.org - Funding Submissions

Notes:

Wireless Funding Submissions

Home | Wireless | Wireline | Contact Info | Resource Info | About

- PSAP Guidelines - FY2003 (PDF)
- PSAP Submission Form - FY2003 (MS Word)
- PSAP Sample Submission Form - FY2003 (PDF)
- PSAP Sample True-up Form - FY2003 (PDF)
- CMRS Funding Guideline - FY2003 (PDF)
- CMRS Submission Form - FY2003 (MS Word)
- Supplemental PSAP Phase II Guidelines - FY2000-02 (PDF)
- Supplemental PSAP Phase II Form - FY2000-02 (MS Word)
- Supplemental CMRS Phase II Guidelines-FY2000-02 (PDF)
- Supplemental CMRS Phase II Form-FY2000-02 (MS Word)
- PSAP Guidelines - FY2002 (PDF)
- PSAP Submission Form - FY2002 (PDF)
- CMRS Funding Guideline - FY2002 (PDF)
- CMRS Submission Form - FY2002 (PDF)
- CMRS Monthly Report Template (MS Excel)

Figure 8 - CMRS Monthly Report

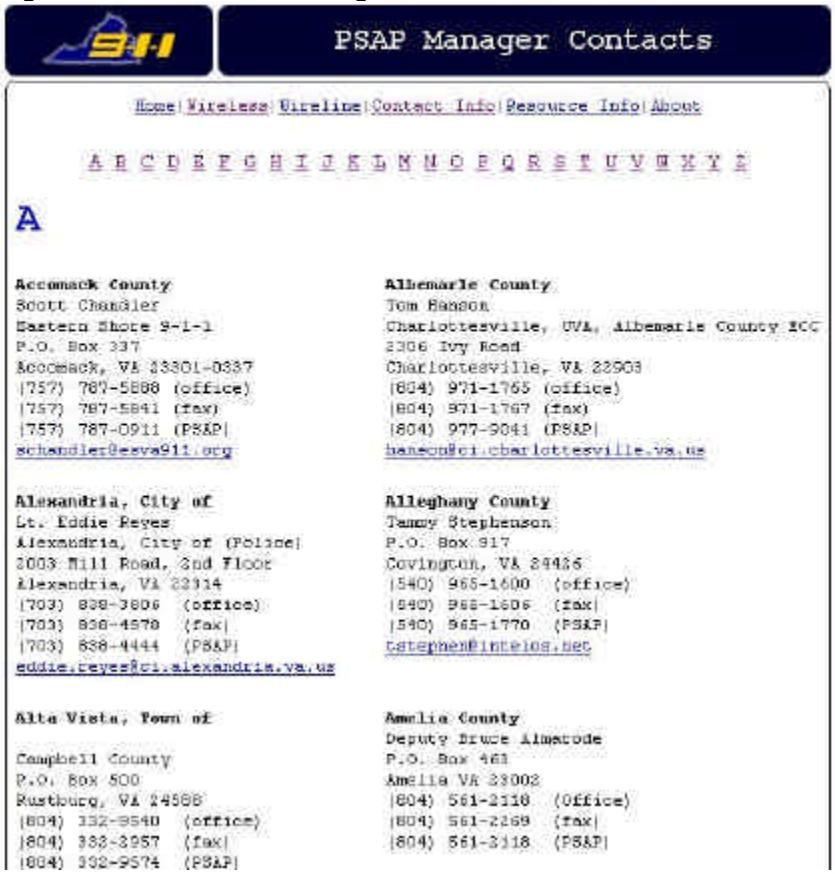
Virginia Wireless E-911 Service Board
Monthly Status Report

CMRS Provider Name: ALLTEL
For period: 09/2001
Prepared by: Linda Kanoon (540-890-7676)

PSAP	Request Date Phase I	Imp Actual Phase I?	Phase I Solution	Request Date Phase II	Imp Actual Phase II?	Phase II Solution	Date/Phase Status
Albemarle	4/10/1997	2/22/01	CAS	6/26/1998			
Amelia							County has not requested Phase I
Amherst							County has not requested Phase I
Appomattox							County has not requested Phase I
City of Bedford	6/23/2000						Rollcon LEC's and, may be delayed to 10/20/01
Bland							County has not requested Phase I
City of Bristol							County has not requested Phase I
Brunswick							County has not requested Phase I
Buchanan							County has not requested Phase I
Buckingham							County has not requested Phase I
Campbell							County has not requested Phase I
Central Virginia	11/27/1999	7/13/2001	CAS				
Charles City							County has not requested Phase I
City of Charlottesville							County has not requested Phase I
City of Chesapeake	6/22/1999	11/2/2001	CAS	4/3/2001			
Chesterfield	4/26/1999	8/17/01	CAS	3/22/2001			
Colonial Heights							County has not requested Phase I
Culpeper	10/21/1999 & 7/19/01						9/24 trunks on order tentative due date 10/15/01
City of Danville	2/9/2000	2/12/01	CAS				
Dinwiddie							County has not requested Phase I
Emporia	9/21/2001						
Fluvanna							County has not requested Phase I
City of Franklin	9/6/2001						
Gloucester							County has not requested Phase I
Goochland							County has not requested Phase I
Greene							County has not requested Phase I
Greensville							County has not requested Phase I
Halifax							County has not requested Phase I
City of Hampton	6/18/1999	11/30/2001	CAS	4/2/2001			
Hanover	11/9/2000						9/24 trunks were due 9/19 ALLTEL following up with Norton

Notes:

Figure 9 - PSAP Contact Listing



PSAP Manager Contacts

Home | Wireless | Wireline | Contact Info | Resource Info | About

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

A

Accomack County
Scott Chandler
Eastern Shore 9-1-1
P.O. Box 337
Accomack, VA 23301-0337
(757) 787-5888 (office)
(757) 787-5841 (fax)
(757) 787-0911 (PS&P)
schandler@esva911.org

Albemarle County
Tom Hanson
Charlottesville, UVA, Albemarle County ECC
2306 Ivy Road
Charlottesville, VA 22903
(804) 971-1765 (office)
(804) 971-1767 (fax)
(804) 977-9041 (PS&P)
hanson@ci.charlottesville.va.us

Alexandria, City of
Lt. Eddie Reyes
Alexandria, City of (Police)
3003 Mill Road, 2nd Floor
Alexandria, VA 22314
(703) 838-3806 (office)
(703) 838-4570 (fax)
(703) 838-4444 (PS&P)
eddie.reyes@ci.alexandria.va.us

Alleghany County
Tammy Stephenson
P.O. Box 917
Covington, VA 24426
(540) 965-1600 (office)
(540) 965-1606 (fax)
(540) 965-1770 (PS&P)
tstephen@intelos.net

Alta Vista, Town of

Campbell County
P.O. Box 500
Rustburg, VA 24588
(804) 332-9540 (office)
(804) 332-3957 (fax)
(804) 332-9574 (PS&P)

Amelia County
Deputy Bruce Almarode
P.O. Box 461
Amelia VA 23002
(804) 561-2118 (Office)
(804) 561-2269 (fax)
(804) 561-3118 (PS&P)

Contact information for each PSAP is listed on the website including a 24-hour telephone number for the PSAP. Soon the website will be expanded to allow the PSAP contact to update his/her own contact information and will have expanded information about the PSAP including amount of personnel and starting salaries.

A section of the website called Resource Information has a number of documents including a wireless E-911 implementation guide, links to other sites, record retention information and information on joining one of three email list servers operated by the DPSC. The list servers offer an excellent tool for the dissemination or request of information. All Board activity and announcements are sent out on the list server.

Figure 10 - Resource Information

Notes:

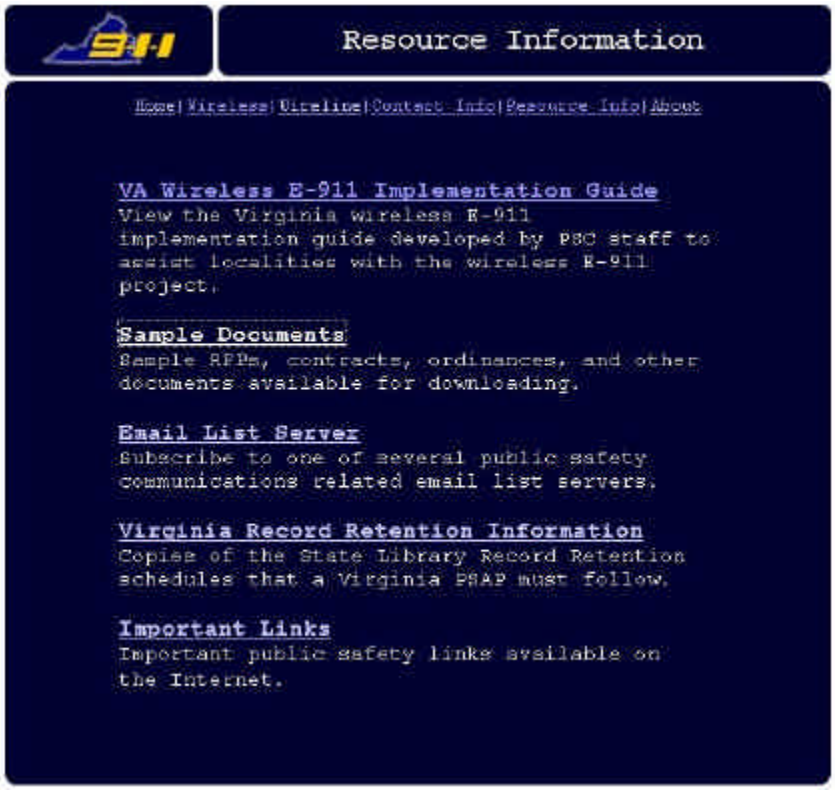
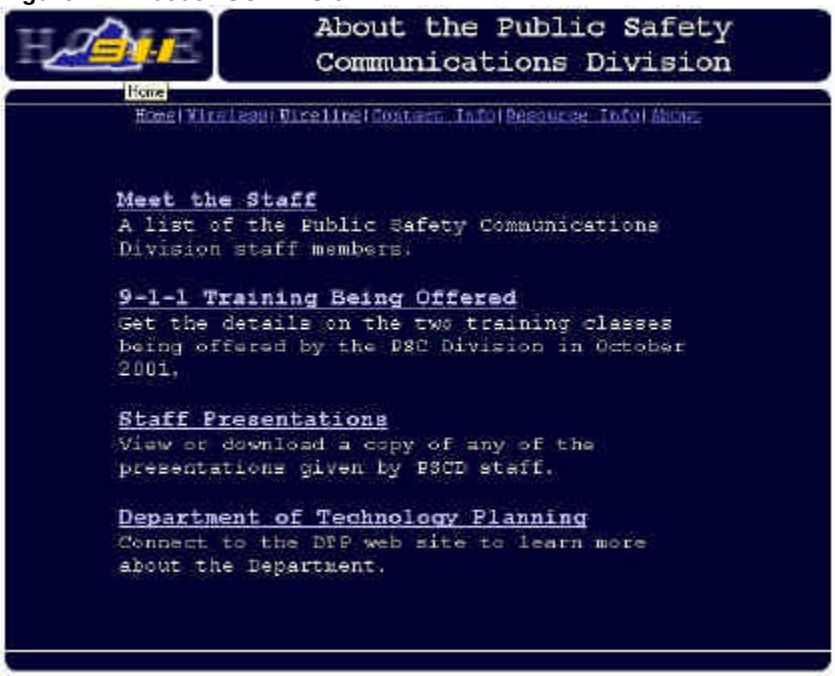


Figure 11 - About PSC Division



Notes:

Finally, the website contains information regarding the DPSC. This area includes contact information for the staff and copies of all presentation made by staff.

Notes:

Wireline E-911

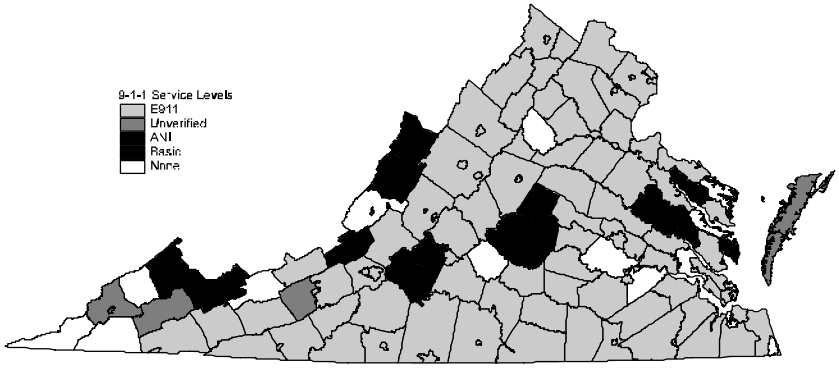
A. Role of the Wireless Board

The *Code of Virginia* establishes the Board's role with wireline E-911 as:

1. Make and enter into all contracts and agreements necessary or incidental to the performance of its duties and the execution of its powers, including purchase agreements payable from (i) the Wireless E-911 Fund and ***(ii) other moneys appropriated for the provision of enhanced wireline emergency telecommunications services only in specific local jurisdictions that are not wireline E-911 capable as of July 1, 2000****.*

B. Current Status

Figure 12 - Wireline E-911 Status



As of July 1, 2000, there were 24 jurisdictions that did not provide enhanced 9-1-1 service; however, four of those jurisdictions (Essex, Lunenburg, Nelson, and Westmoreland Counties) implemented by the end of FY2001. In addition to these jurisdictions, there are ten more that provide a form of enhanced 9-1-1 that may not be considered as truly enhanced. In these jurisdictions the enhanced 9-1-1 equipment exists, but the location information displayed to the call taker is rural route information or directions and not a street address that has been validated. This may have originally been done as a cost saving measure, as it does not require the locality to map or address the jurisdiction. However, such jurisdictions may need to assign street addresses to the structures throughout these localities in order to become fully enhanced.

Limited progress has been made in the deployment of E-911 since the deadlines were enacted. One hindrance continues to be a lack of funding in some localities. While some localities such as Bland, Madison, Fluvanna, Mathews, Buchanan and Dickenson Counties have been able to at least get started with

the process, other have not yet begun or do not have the funding to enter into critical contracts.

Since no funding was provided this fiscal year, it is not likely that the July 1, 2003 deadline will be attainable by all localities; however, the Board has the authority to grant extensions of time as appropriate.

Notes:

C. State Funding Guidelines

The Wireless E-911 Services Board is responsible for the establishment of the wireline E-911 grant guidelines. At their November and December 2000 meetings, the Board considered the following issues:

- Whether non-verified enhanced 9-1-1 should be considered as truly enhanced.
- What costs should be allowable under the grant program.
- How to measure a jurisdiction's need for state financial assistance.
- Should the grant be a single or multiple year grant.

The following sections detail the results of those discussions.

(1) Non-Verified E-911

Eight jurisdictions currently provide a type of enhanced 9-1-1 service that does not verify the address information when it is entered into the 9-1-1 database. Simply put, whatever location information is provided to the telephone company when the telephone service is ordered is entered into the 9-1-1 database. In a typical enhanced 9-1-1 system, all telephone service requests are verified against a list of the valid street names and address ranges in the jurisdiction. Consequently, if a citizen requests telephone service and provides an incorrect address, it is identified as an error and is flagged for resolution. This does not happen with a non-verified enhanced 9-1-1 system. All records are entered in the 9-1-1 database regardless of being valid. Instead of addresses, rural route or direction information is used in the 9-1-1 database.

The Wireless E-911 Services Board considered whether this level of service should be considered as being fully enhanced 9-1-1. The Board decided that since non-verified does not provide all of the benefits of E-911, these ten localities should be required to become fully enhanced 9-1-1 capable by the July 1, 2003 deadline established by *Code*. Four of the eight jurisdictions have everything in place to become fully enhanced. They are mapped, addressed, and have

all of the required equipment. They need only communicate the valid street information to the telephone company, then the telephone company can validate all of the existing records in the 9-1-1 database. After fixing any invalid records, the jurisdiction will be providing fully enhanced 9-1-1. The four remaining jurisdictions need to map and address the jurisdiction before going through the validation process. Some of these jurisdictions may have a financial need for state assistance in order to complete this process.

(2) Allowable Costs

The Wireless E-911 Services Board has determined that the following costs should be considered allowable under the wireline E-911 grant guidelines:

- mapping;
- addressing;
- street signage;
- customer premise equipment (PSAP equipment); and
- network costs.

Further the Board has determined that the following costs be specifically identified as not being eligible for funding under the wireline E-911 grant guidelines:

- recurring E-911 costs;
- voice logging equipment;
- computer-aided dispatch systems;
- buildings and furnishings; and
- radio systems.

The Board would consider any other items on a case-by-case basis.

(3) Ability to Pay

The Wireless E-911 Services Board considered two methods for determining the financial need of each jurisdiction. The first method utilizes the Composite Index to determine the percentage of the allowable costs that the jurisdiction must fund. The Composite Index is used elsewhere in state government as an ability to pay indicator for localities, such as for education funding. As an illustration, if a jurisdiction has a Composite Index of .2345, the jurisdiction must fund 23.45% of the allowable cost of the project while the Board will fund 76.55% of the cost.

The second method considered by the Board for determining the financial need of a jurisdiction was

Notes:

based on the amount of funding that could be generated by the local E-911 surcharge. For a jurisdiction with 5,000 telephone lines, the amount funded by the jurisdiction would be calculated by multiplying the telephone line count by $1.50 (a midrange surcharge) by 24 months (the amount of time before the July 1, 2003 deadline). In this case the jurisdiction would fund $180,000 while the Board would fund the remaining cost of the project.

Since the Composite Index is an established method of determining a jurisdiction's ability to pay, the Wireless E-911 Services Board selected it as the preferred method; however, a disadvantage of this method was identified. A few of the jurisdictions would not be able to generate their share of the project funding using the local E-911 surcharge. In order to generate their share, one jurisdiction would have to charge $6.50 per month per access line over the next 24 months, which significantly exceeds the $3.00 monthly cap established in §58.1-3813.1 of the *Code of Virginia*.

Figure 13 - Locality Funding by Composite Index Method

		Composite Method			
County	**Projected Cost**	**Composite Index**	**Jurisdiction Share**	**State Share**	**Surcharge Needed**
Alleghany County	$ 370,000	0.3354	$ 124,098	$ 245,902	$ 0.84
Appomattox County	$ 470,000	0.3121	$ 146,687	$ 323,313	$ 1.00
Bath County	**$ 455,000**	**0.8000**	**$ 364,000**	**$ 91,000**	**$ 3.64**
Bland County	$ 455,000	0.2748	$ 125,034	$ 329,966	$ 1.49
Buchanan County	$ 507,500	0.2573	$ 130,580	$ 376,920	$ 0.51
Buckingham County	$ 275,000	0.2694	$ 74,085	$ 200,915	$ 0.42
City of Clifton Forge	$ 340,000	0.2423	$ 82,382	$ 257,618	$ 1.57
City of Covington	$ 355,000	0.3358	$ 119,209	$ 235,791	$ 1.44
Craig County	$ 447,500	0.3416	$ 152,866	$ 294,634	$ 2.48
Cumberland County	$ 175,000	0.3394	$ 59,395	$ 115,605	$ 0.62
Dickenson County	$ 485,000	0.2358	$ 114,363	$ 370,637	$ 0.58
Fluvanna County	$ 500,000	0.3817	$ 190,850	$ 309,150	$ 0.83
Highland County	**$ 440,000**	**0.5502**	**$ 242,088**	**$ 197,912**	**$ 6.50**
King and Queen County	$ 455,000	0.4021	$ 182,956	$ 272,045	$ 1.92
King William County	$ 202,500	0.3662	$ 74,156	$ 128,345	$ 0.48
Lee County	$ 522,500	0.1886	$ 98,544	$ 423,957	$ 0.33
Madison County	$ 470,000	0.4005	$ 188,235	$ 281,765	$ 1.35
Mathews County	$ 462,500	0.4798	$ 221,908	$ 240,593	$ 2.01
Middlesex County	$ 287,500	0.5658	$ 162,668	$ 124,833	$ 1.40
Russell County	$ 275,000	0.2298	$ 63,195	$ 211,805	$ 0.19
Scott County	$ 507,500	0.2298	$ 116,624	$ 390,877	$ 0.44
Wise County	$ 275,000	0.2237	$ 61,518	$ 213,483	$ 0.13
	$8,457,500		**$3,033,920**	**$5,423,580**	

Notes:

To address this shortcoming, the Board developed the "Capped Composite" method of determining a jurisdiction's ability to pay. This method caps the jurisdiction's share as calculated using the Composite Index at the amount the jurisdiction can generate imposing a $1.50 over 24 months. The $1.50 amount is used rather than $3.00 to allow jurisdictions to use the surcharge to generate additional revenue for expenditures not covered by this grant, such as the salary of an
E-911 Coordinator, and in deference to concerns raised regarding the amount of the E-911 surcharges.

Though the projections indicate that the state share of funding is $5,983,828, an appropriate amount of funding needs to be added to deal with the inevitable contingencies, such as the need to fund services not currently identified or fund a greater percentage of the cost, should the locality be able to demonstrate the fiscal need.

Figure 14 - Localities impacted by the Capped Composite Method

		Capped Composite		
County	**Project Cost**	**Jurisdiction Share**	**State Share**	**Amount Increased**
Bath County	$ 455,000	$ 150,156	$ 304,844	$ 213,844
City of Clifton Forge	$ 340,000	$ 78,587	$ 261,413	$ 3,795
Craig County	$ 447,500	$ 92,468	$ 355,032	$ 60,398
Highland County	$ 440,000	$ 55,872	$ 384,128	$ 186,216
King and Queen County	$ 455,000	$ 143,172	$ 311,828	$ 39,784
Mathews County	$ 462,500	$ 165,695	$ 296,805	$ 56,212
				$ 560,248

(4) Single/Multiple Year Grant

The Wireless E-911 Services Board has determined that a multiple year grant is most appropriate for this project. This means that a jurisdiction will submit a grant request for the entire project amount rather than only that which can be spent in the following fiscal year. In this way, the Board can determine the projected cost of the entire project so that a single appropriation can be made.

D. Policies Adopted by the Board

The Board has passed two policies to encourage localities to proceed with whatever they can get completed.

First, they passed a policy stating that they will look favorably upon requests for extension of time to implement wireline E-

Notes:

911 from localities that were negatively impacted by the lack of funding.

The second policy states that localities are eligible for funding expenses incurred after July 1, 2000 even though funding may not be available until FY2003.

E. Future Activities

The single most important issue facing the implementation of wireline E-911 is the appropriation of funding for the grants to localities. The Wireless E-911 Services Board has renewed their request for $9.8 million.

Wireless E-911

A. Wireless 101

Today's society is becoming more and more mobile. Current estimates place the number of wireless telephones in the United States at over 120 million (2.5 million in Virginia in June 2001) with 40,000 being added each day. Public safety answering points (PSAP) around the nation have reported that the percentage of calls coming from wireless telephones is increasing at an exponential rate. Of concern to the PSAPs is that wireless calls to 9-1-1 do not provide the location of the caller the way wireline enhanced 9-1-1 does. This lack of an automatic location results in more time for the call taker to process the call or an inability to locate the caller at all. Several recent incidents have occurred around the country that demonstrate the problems PSAPs can have locating a wireless 9-1-1 caller.

To respond to this issue, in 1996, the FCC released an order requiring wireless service providers to implement enhanced features and location technology. The implementation was to occur in two phases. Phase I provides the PSAP with the caller's telephone number and the address of the cell site receiving the call along with the orientation of the antenna, if the antenna is directional. Phase II provides the PSAP with the actual location of the caller within a defined margin of error depending on the location technology used by the provider.

According to the order, the wireless service provider must implement Phase I within six months of a request from the PSAP. The timeline for Phase II is contingent on the location technology selected by the wireless service provider, network-based (triangulation) or handset-based (global positioning system – GPS).

(1) Phase 0

Phase 0 means that a PSAP directly receives all wireless calls made within their respective jurisdiction

Notes:

at their communications center. In a Phase 0 environment, a PSAP will get the wireless 911 call only with no enhanced information to include ANI or ALI. Most Local Exchange Companies (LECs) will only forward Phase 0 calls to a seven-digit dial number, not a 911 trunk line.

A limited number of PSAPs were initially set up during the 1990s to receive wireless 911 calls, but in most jurisdictions around Virginia, wireless 911 calls were set up to be received at the respective State Police District headquarters. The state police telecommunicator has to determine from the caller what the appropriate jurisdiction the incident is located in and then transfer the caller to that respective PSAP.

The General Assembly has now required that all PSAPs that were E-911 capable by July 1, 2000 start receiving wireless 911 calls by NLT July 1, 2002. All other PSAPs must start receiving wireless 911 calls by July 1, 2003. PSAPs that are at Phase 0 by the respective date will meet the minimum requirement of the law; however, it must be pointed out that no grant funds are authorized for Phase 0. More importantly, wireless Phase 0 requirements do not provide 911 callers with the best chance of receiving timely emergency assistance. When dispatchers receive enhanced ANI and ALI information, they can provide better and generally, far more timely assistance to the caller.

(2) Phase I

Phase 1 means that a PSAP receives a caller's Call Back Number (CBI) or ANI, the identity of the wireless provider and the location of the cellular antenna receiving the wireless call.

There are also two types of antennas, omni directional and sectored. While a call on an omni antenna cannot be narrowed down, a sectored tower can provide which of three 120-degree sectors received the call. At a five-mile radius of coverage, the sector will get you within 26 square miles.

To get Phase I information under the FCC order three conditions must be met:

- the PSAP must make a written request of the wireless provider;
- the PSAP must have cost recovery in place; and
- the PSAP must be able to use the data received.

Notes:

PSAPs that elect to receive Phase I wireless calls will provide the caller with a much better chance of receiving timely assistance and do qualify for grant funds to install the necessary equipment upgrades. Please note that Phase 1 requires that all wireless sites within a jurisdiction be numerically addressed just like a building. If this has not been a routine procedure in your jurisdiction, begin to address those structures now.

There are two technologies for the delivery of the Phase I data to the PSAP, Call-path Associated Signaling (CAS) and Non Call-path Associated Signaling (NCAS).

Figure 15 - Call-path Associated Signaling (CAS)

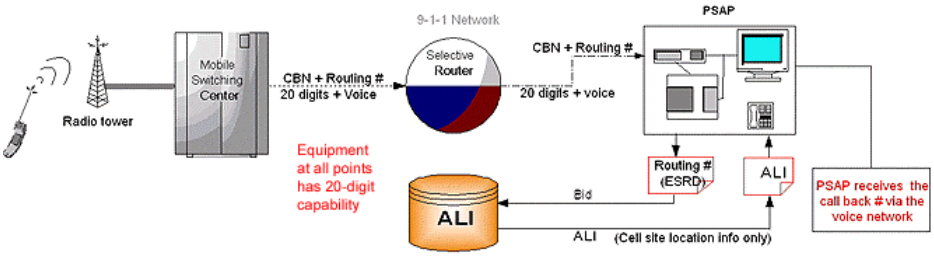
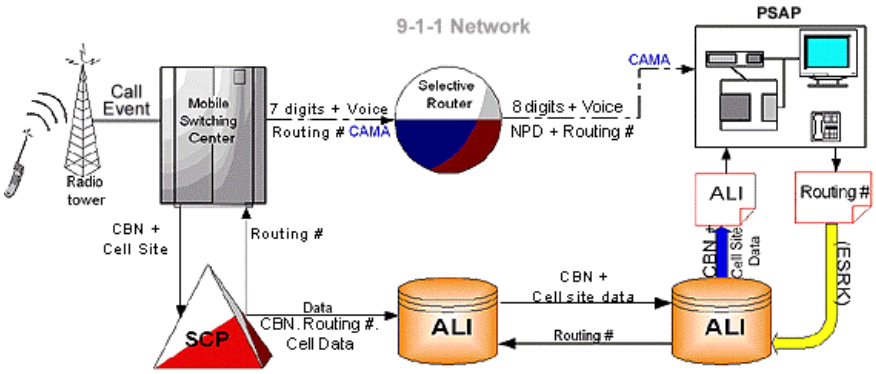


Figure 16 - Non Call-path Associated Signaling (NCAS)



In the CAS solution, the wireless service provider transmits the voice and the Phase I information on the same path to the PSAP. To do this, they transmit a 20-digit number that includes the call back number and an identifier number for the cell site. An ALI record corresponding with the cell site identifier is pre-built in the database for retrieval by the PSAP.

In the NCAS solution, the voice and the data are split. The voice and a single 8 to 10-digit number is sent to the PSAP via the 9-1-1 tandem. The number

Notes:

determines the routing of the call but does not correlate to the cell site or caller information. The cell site and call back information is transmitted on the fly to a third party provider's ALI database and an ALI record is created. When the PSAP does the ALI lookup the request is steered to the third party provider and the ALI record with all of the needed data is retrieved.

The technical differences between CAS and NCAS are not overly important. The importance to the PSAP is that CAS may require an upgrade to the CPE equipment in the PSAP and the 9-1-1 tandem/selective router as both must be able to receive and process twenty digits.

(3) Phase II

Phase II wireless is the next step for wireless E-911 calls that the FCC has mandated that wireless providers make available as of October 1, 2001 provided a jurisdiction makes a request for the service and can use the data received. The timeline and accuracy for Phase II ALI is contingent on the technology that a wireless provider selects to implement, network-based (triangulation) or handset-based (global positioning system – GPS).

Figure 17 - Phase II Accuracy and Timing Requirements

Phase II Error/Timing

Network based solution:

Accuracy

- 100 meter accuracy 67% of the time
- 300 meter accuracy 95% of the time

Timing

- Six months after request must implement 50% of network
- 100% of network within 18 months of request

Handset based solution:

Accuracy

- 50 meter accuracy 67% of the time
- 150 meter accuracy 95% of the time

Timing

- Must offer handsets with GPS capability by October 2001
- 25% of new handsets must be GPS capable by December 31, 2001
- 50% of new handsets must be GPS capable by June 30, 2002
- 100% of new handsets must be GPS capable by December 31, 2002
- 95% of all customers must be converted to GPS capable handsets by December 31, 2005

Notes:

Handset-based solutions include:

- AGPS – Assisted GPS – uses the DOD satellites to pin point location. Since satellites must be "visible" to handset, network assistance is used in cases where they are not.

Network-based solutions include:

- Time Distance of Arrival – TDOA – requires equipment at each tower site that can calculate the time difference of the signal traveling at the speed of light arriving at each of three tower sites. At least three sites must be "visible" to the handset.
- Angle of Arrival – AOA – requires equipment at each site to determine the angle the signal arrives at the tower for at least two sites.

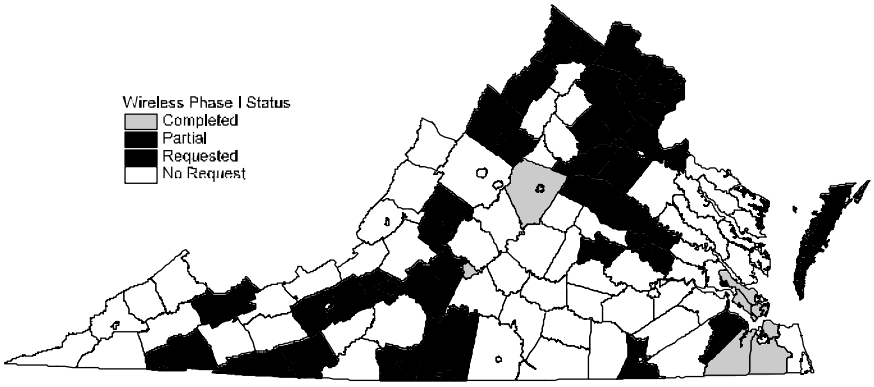
Hybrid solutions also exist that combine TDOA and AOA or TDOA and GPS in an attempt to compensate for the shortcomings of either solution by itself.

Currently, some Virginia providers have selected a network-based solution and others, a handset-based solution. None were implemented by the FCC mandated October 1, 2001 deadline. All of the major providers have requested waivers from the FCC for the implementation of Phase II. Some sought relatively short extensions of time, while others sought relief from the accuracy requirements. Very recently, the FCC has granted several of the requests, but it is unclear at this point exactly what was granted as the detailed orders from the FCC have not yet been released.

B. Current Status

Currently, ten localities have implemented Phase I service with all of the wireless providers serving their PSAP. Thirty-one other localities have implemented with at least one provider.

Figure 18 - Phase I Status



Notes:

In FY2002, 57 PSAPs (73 localities) are receiving funding.

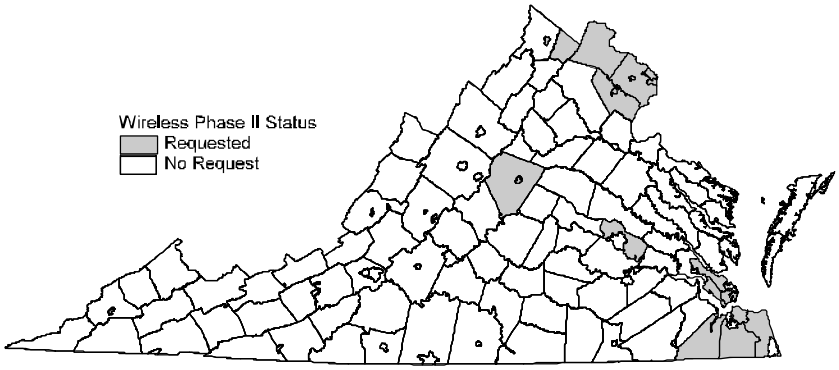
Figure 19 - Wireless Funding Received by Locality

Jurisdiction	FY2000	FY2001	FY2002
Alexandria, City of (Police)	$149,045.00	$126,291.00	$156,998.51
Amherst County			$126,366.53
Arlington County	$193,039.00	$283,021.00	$216,336.00
Bedford County		$153,536.00	$49,775.28
Blacksburg, Town of			$83,655.00
Botetourt County			$42,346.00
Buckingham County			$26,486.00
Charlottesville, UVA, Albemarle Co.	$185,610.00	$137,735.53	$246,790.00
Chesapeake, City of	$112,982.00	$136,149.00	$152,650.00
Chesterfield County	$116,323.00	$282,964.00	$181,527.00
Christiansburg, City of		$96,913.00	$8,000.00
Clarke County		$65,067.00	$18,343.00
Culpeper County		$39,310.00	$53,094.00
Danville, City of		$147,606.00	$76,751.57
Eastern Shore 9-1-1	$109,561.00	$44,295.21	$47,412.62
Emporia, City of			$51,314.00
Fairfax County	$1,249,602.00	$1,636,330.00	$1,979,879.00
Franklin, City of			$54,142.25
Frederick County		$83,172.00	$20,284.66
Hampton, City of	$206,029.00	$105,142.00	$85,744.00
Hanover County		$171,876.58	$266,730.49
Harrisonburg - Rockingham 9-1-1	$106,575.08	$167,201.19	$167,201.19
Henrico County	$132,741.00	$241,833.00	$133,395.00
Hopewell, City of			$109,379.00
Isle of Wight County			$59,084.00
James City County		$99,109.00	$55,509.00
Loudoun County	$83,523.00	$91,722.00	$110,058.00
Louisa County		$50,573.37	$77,879.00
Lynchburg, City of	$127,130.00	$79,211.00	$173,797.00
Martinsville – Henry County 9-1-1		$41,862.00	$55,106.00
Middlesex County		$48,719.20	$0.00
Montgomery County		$71,925.00	$6,849.00
Newport News, City of	$170,684.00	$119,163.20	$140,101.00
Norfolk, City of	$192,593.00	$253,711.00	$445,105.00
Orange County		$131,091.13	$52,526.00
Pittsylvania County		$87,481.00	$22,299.00
Portsmouth, City of	$130,134.00	$121,006.00	$133,285.00
Powhatan County	$5,613.00	$86,676.00	$28,568.00
Prince William County	$347,277.00	$477,032.00	$457,167.00
Richmond, City of	$89,740.00	$140,812.00	$143,825.00
Roanoke County			$211,885.75
Roanoke, City of			$232,418.00
Rockbridge Regional 9-1-1		$1,236.00	$48,308.00
Salem, City of			$87,085.00
Shenandoah County	$62,155.89	$124,381.00	$40,400.00
Smyth County			$23,043.00
Spotsylvania County			$41,956.68
Stafford County			$95,969.65
Suffolk, City of	$35,051.00	$177,285.75	$45,565.00
Twin Counties 9-1-1		$67,977.00	$79,184.00
Virginia Beach, City of	$159,504.00	$248,675.00	$385,175.00
Warrenton - Fauquier Joint 9-1-1		$43,477.00	$50,213.00
Washington County			$47,871.00
Westmoreland County		$32,194.60	$7,932.00
Williamsburg, City of			$64,179.00
Winchester, City of		$78,365.02	$34,055.00
York County	$57,286.00	$63,873.00	$51,076.84
Total	**$4,022,197.97**	**$6,659,860.81**	**$7,674,001.02**

Notes:

At present, twenty-four localities within Virginia have made their formal requests of their providers for Phase II service.

Figure 20 - Phase II Status



C. Roles with Wireless 9-1-1

(1) PSAP

The PSAP must make the request for service and must coordinate upgrade of any PSAP equipment with the local exchange carrier (LEC). If funding is needed, the PSAP must complete all of the requirements of the funding guidelines.

(2) LEC

The PSAP should meet with the LEC early and often to ensure that all necessary steps are taken. Though it is wireless E-911, the call enters the wireline E-911 network at the 9-1-1 tandem/selective router. The LEC also typically provides the trunking to the tandem. Trunk orders require significant lead time and coordination so the LEC should be involved from the start.

(3) Wireless Service Provider

The wireless service provider is actually the only group required to perform by the FCC order. Once requested, the wireless service provider should implement service within 6 month of the request.

(4) Third Party Provider

The wireless service provider typically works with a third party provider for project management and database services. There are three currently providing services to Virginia; Intrado, TCS/XYPoint, and TSI.

Notes:

D. State Funding Guidelines

(1) General

Payments from the Fund, unless otherwise provided for in law, are limited under Article 7 to "direct" and "reasonable" costs associated with the provision of enhanced 911 services as defined under Federal Communications Commission Order 94-102. Funding is only available to a primary PSAP, defined as a PSAP, which receives a wireless 911 call directly from a CMRS provider. The PSAP must provide the Board with the number of total calls, total 911 calls and total wireless 911 calls that the PSAP projects will be received during FY2003. If a PSAP that does not have actual call counts on which to base a projection, the PSAP must submit evidence of the reasonableness of the projections.

(2) Phase I

Equipment Dedicated to Wireless 9-1-1

The Board shall provide full (100%) funding for any equipment used solely for the processing of wireless E-911 calls. In Phase I, this equipment includes the following:

- Customer premise equipment (CPE) upgrades specifically for wireless E-911 (i.e. 20-digit upgrade).
- Trunk interface unit (TIU) cards for dedicated wireless trunks.
- Voice logging recorder expansion for dedicated wireless trunks.
- CAD system upgrades caused by wireless E-911 (i.e. ALI data stream format change to CAD interface).
- Since the Board requires call count reporting, the initial purchase of call accounting software if the PSAP does not already have such a system.

Shared Equipment

The Board shall provide proportional funding for any equipment that is shared between wireless E-911 calls and other types of calls. The formula for determining this proportion shall depend on the use of the piece of equipment. The proportion shall be determined by the dividing the number of wireless 9-1-1 calls by the total number of calls processed by the equipment. Consequently, equipment used only for 9-1-1 (wireline and wireless) shall be funded to the proportion of wireless 9-1-1 calls to total 9-1-1 calls. Equipment that processes all calls received by the PSAP shall be funded to the proportion of wireless 9-1-1 calls to total calls (9-1-1, administrative, etc.) received by the

Notes:

PSAP. The following list is of equipment typically (but not all inclusive) considered to be shared use:

- CPE purchase or replacement.
- CPE maintenance or lease.
- Voice logging recorder purchase or replacement.
- Call accounting software replacement, upgrade and maintenance.

The following list of equipment is specifically excluded from funding as shared equipment under Phase I:

- Radio system purchase, maintenance, etc.
- CAD system purchase, maintenance, etc. (though funding is available to PSAPs requesting Phase II service).
- PSAP building and furnishings.

Local Exchange Carrier (LEC) Costs

The Board shall provide full (100%) funding for any LEC costs required solely for the processing of wireless E-911 calls. In Phase I, these costs include the following:

- Selective router/tandem upgrades (typically required only for the call path associated signaling (CAS) solution).
- Dedicated wireless E-911 trunks (installation and monthly cost).

Personnel Costs

The Board shall provide funding for personnel costs to the proportion of wireless 9-1-1 calls to total calls (9-1-1, administrative, etc.) received by the PSAP. The personnel costs of the PSAP may include the following:

- Salary and benefits of call takers and dispatchers (full and part time).
- Salary and benefits of the PSAP director or coordinator so long as they have no responsibilities other than the PSAP.
- Holiday or overtime compensation.
- Salary and benefits of training coordinators.
- Any other training costs incurred by the PSAP.

Specifically excluded from eligible personnel costs is any funding received from the Compensation Board. Only funding provided by the locality shall be used in the calculation of personnel costs.

The PSAP shall be eligible to recovery personnel costs six-months prior to the expected implementation date to allow sufficient time to hire and train new personnel, if necessary.

Notes:

For example, a PSAP, which expects to implement on March 31, 2003, may receive funding for personnel costs from October 1, 2002.

(3) Phase II

Phase I Costs
After making a request for Phase II service, a PSAP shall still be eligible for all associated Phase I costs. The following guidelines for Phase II cost recovery should be viewed as being in addition to any Phase I costs already being received by the PSAP.

Mapping Data
The Board shall provide funding for the creation of mapping data needed for the location of a wireless caller by longitude and latitude. On October 10, 2001 the Board approved funding for the statewide base-mapping program in partnership with the Virginia Geographical Information Network (VGIN).

Working in partnership with VGIN and other state agencies, such as VDOT, the Board will provide funding to a statewide program that will develop a standardized base map for all to use.

In addition to the creation of the data, the Board shall provide proportional funding for any PSAP personnel utilized for the creation or maintenance of mapping data. The salary and benefits of such personnel may simply be added to the personnel costs for Phase I. The Board shall also provide proportional funding for addressing equipment such as a GPS received used to locate buildings. The cost of this equipment may be considered with other shared equipment.

Mapping Display System
For Phase II, the Board has classified the initial purchase of a mapping display system in the PSAP to be “Equipment Dedicated to Wireless E-911”, as outlined above. The PSAP may choose to implement the mapping display system as part of the CPE equipment, computer-aided dispatch (CAD) system, or as a separate stand-alone system. No matter which method is selected, the Board shall provide full (100%) funding for the implementation of the system if the PSAP does not already have a computerized mapping capability. If the PSAP already has a mapping capability through a CAD system, the Board shall provide full (100%) funding (“Equipment Dedicated to Wireless E-911”) for an interface between the existing mapping system and the new wireless Phase II data. PSAPs choosing to implement the mapping display system as part of a CAD system and the PSAP did not

Notes:

previously operate a CAD system shall not only be eligible for full (100%) funding of the mapping display component and interface for the new CAD system but shall also be eligible for proportional funding of remaining cost of the overall CAD system. Any funding received from other state or federal grants must be excluded from the remaining cost of the system.

The Board shall fund the replacement of mapping display systems as shared equipment, as outlined above. Regardless of whether the mapping display system is part of the CPE equipment, CAD system, or a stand-alone system the same proportional funding will be provided except that if the entire CAD system is also replaced, the PSAP shall be eligible for proportional funding of only the mapping display system and interface components. No funding shall be provided for the remaining cost of the CAD system. The Board shall also fund the maintenance of the mapping display as shared equipment for the CPE based and stand-alone systems. No funding shall be provided for the CAD system based configuration due to the complexity of splitting the cost out and the highly variable levels of service.

Another option the Board considered for the provision of a mapping display system was a service provider based system. The Board would also provide full (100%) funding for this type of system.

(4) Project Management

The Board shall provide funding for reasonable project management costs for Phase I and Phase II implementation. To be eligible for funding the PSAP must select a project management consultant from the statewide contract. The maximum allowable cost for project management for each PSAP is $32,000 for each phase of implementation. However, the Board shall provide 100% funding of reasonable project management costs, with no cap, for implementations coordinated at a regional level. Each region, which must consist of at least five (5) contiguous localities, must select a single consultant from the state contract for the region. Invoicing may be conducted through the Board.

E. Funding Request Worksheet

Any PSAP intending to implement wireless enhanced 9-1-1 Phase I or Phase II is strongly encouraged to submit a funding request to the Board. The Wireless E-911 PSAP Funding Request Worksheet (attached) has been designed to simplify the process of applying for funding for wireless E-911

Notes:

improvements. The worksheet supports both the application for grant funds prior to the beginning of a fiscal year and also is used for the "true-up" process at the close of the same fiscal year. The Worksheet is composed of six separate areas that are compiled to complete the form. They consist of the following:

1. Header information
2. Call Load Data
3. Equipment dedicated to Wireless E-911
4. Shared Equipment
5. Local Exchange Carrier Costs
6. Personnel Costs

To the right of each area are two boxes, one titled "Estimated Cost" and one titled actual cost. Only the box titled "Estimated Costs" should be filled in for the grant application.
The "Actual Cost" box is left blank until the true-up process (discussed below) at the completion of the fiscal year.
Items listed in each section should be itemized to allow the Board to fully understand the extent of the request. Items listed simply as "software" or "maintenance" will not be acceptable.

Greater detail or explanation is necessary, such as "software upgrade to CPE to allow 20-digit processing" or "maintenance of CPE equipment", to allow the Board to determine if the request falls within these guidelines.

(1) Header Data

Under this section list the jurisdiction name and applicable fiscal year for which funds are requested. Also, after completing the rest of the worksheet, fill in the Total Funding Request at top right.

(2) Call Load Data

Call Load Data should be filled in for both the "Last 12 Months" and the "Estimated" categories. The "Last 12 Months" column is to give the Board a measure of the reasonableness of the estimated counts. If this information is unavailable for the previous 12 months put "N/A" in the fields.

For the "Estimated" category, simply estimate how many calls your PSAP will answer during the fiscal year in which funds are requested. If prior data is not available on which to base a projection, the PSAP must attach to the worksheet an explanation of how the projection was developed. One method on developing a projection is to count calls manually for a period of 30 days and multiple that number by 12. A

Notes:

reasonable growth factor may also be applied to that extrapolated yearly figure. While this may not be perfectly accurate, it will suffice for the estimate process so long as the 30-day window is not unusually busy or slow. Call accounting software, fully funded by the Board, will take most of the guesswork out of this part of the worksheet.

The category of each type of call is as follows:

Total Telephone Calls
This should include all calls answered by the call takers and dispatchers in the PSAP. The total should include all 9-1-1 calls (wireline and wireless), all 7-digit dial numbers and any other administrative calls answered in the PSAP.

Total 911 Calls
This should include all 9-1-1 calls answered by the PSAP including both wireline and wireless.

Total Wireless Calls
This should include all wireless 9-1-1 calls answered by the PSAP. It does not include wireless 9-1-1 calls transferred to the PSAP by the State Police.

(3) Equipment Dedicated to Wireless E-911

In this section, list any equipment dedicated to the processing of wireless E-911 calls, as defined above. Total the list of the equipment to the top of the section.

(4) Shared equipment

In this section, list any shared equipment, as defined above. Total the cost of any equipment shared between wireless 9-1-1 and all 9-1-1 calls and multiple this amount by that proportion. Total the cost of any equipment shared between wireless 9-1-1 and all calls answered by the PSAP and multiple this amount by that proportion. Add the two totals together and enter it at the top of the section.

(5) Local Exchange Carrier (LEC) Costs

In this section, list any LEC costs, as defined above. Total the list to LEC costs to the top of the section.

Notes:

(6) Personnel Costs

In this section, list any personnel costs, as defined above. Please remember to exclude any compensation Board funding and itemize the list of costs so that the Board can determine the appropriateness of funding. Total the list to the formula below the table.

Multiple the total by the proportion of wireless E-911 calls to total calls received by the PSAP and place this amount at the top of the section.

F. Submission Instructions

After completing the worksheet and totaling the costs to the top of the form, mail, fax or email it to the Board. No supporting material is required for the funding request unless the call count projection explanation is required (above). The deadline for submission for the FY2003 period is October 1, 2001. However, this deadline is only significant if sufficient funding is not available to all requests. In such a case, the available funding is prorated among all of the requests received by October 1. By Virginia Code, the Board must consider funding requests received after October 1 to the extent there is available funding.

G. Approval Process

The Board will review each request and approve the request in accordance with these guidelines. The Board may remove specific items before an approval is given. The Board will approve the funding requests by March 1, 2002 so that the localities will know their funding level prior to the approval of their local budgets.

H. Distribution of Funding

All payments based on the approved costs for FY 2003 shall be disbursed in four quarterly installments equal to one-quarter of the total amount approved by the Board.

I. True-up Process

Each PSAP filing a cost estimate and receiving payments during FY 2003 pursuant to these guidelines must file a statement of actual costs incurred during FY 2003 with the Board no later than September 1, 2003. Where appropriate, the PSAP must submit copies of paid invoices, purchase orders or other evidence of how the funding was expended. The actual equipment purchased may vary from that approved by the Board.

So long as the actual equipment is still allowable under these guidelines, the Board may provide funding. The Board does not true-up on an item by item basis but rather only compares

Notes:

the bottom line funding received versus the amount actually expended to implement wireless E-911.

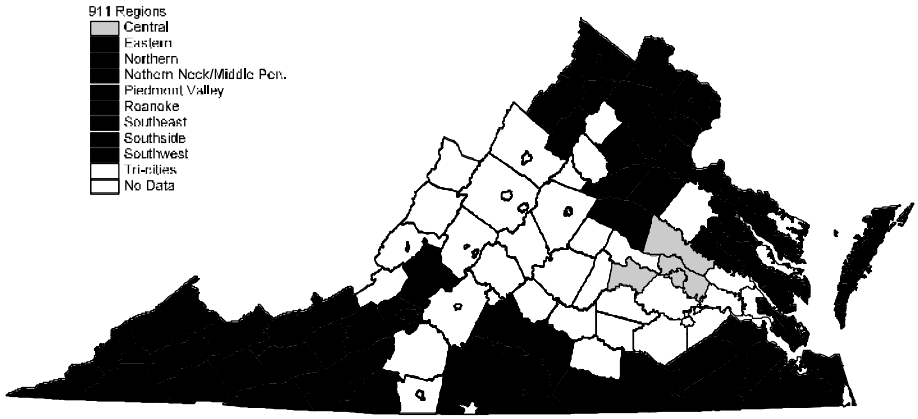
Payments received in excess of the approved costs shall be refunded to the Board or credited to qualifying payments in subsequent years on such schedules as the Board may determine. Each PSAP participating in the FY 2003 program shall also be required to provide information on how actual call count volume varied from the information provided as part of the cost estimate. The Board strongly encourages each PSAP participating in the E-911 program to develop and maintain accurate and reliable information on total calls received, total 911 calls, and total wireless 911 calls received by the PSAP.

J. Amendment of these Guidelines

The Board reserves the right to adopt such amendments to these guidelines as may be necessary to implement Article 7. PSAP are strongly encouraged to suggest changes they feel may be appropriate to improve the implementation of Phase I and Phase II service.

K. Regional Efforts

Figure 21 - Existing Regional Efforts for Wireless



Several regional efforts have formed to address wireless E-911. While not required, the Board has found that the existence of a regional effort has help individual localities with the implementation process.

L. Practical Exercises

Blank Forms have been attached to this material for conducting several practical exercises for the submitting funding requests.

Notes:

Public Education

Notes:

A. Legislative Mandate

The Wireless E-911 Services Board has as one of its duties in §56-484.14:

6. Take all steps necessary to inform the public of the use of the digits "9-1-1" as the designated emergency telephone number and the use of the digits "#-7-7" as a designated nonemergency telephone number.

While the Board has not addressed this duty during their start up year, it will become more of a focus for the upcoming year.

B. Making the Right Call

The first program announced to meet this duty is “Making the Right Call.” The program is already being used in a few localities around the state. The goal is to make it available statewide. The purpose of the program is to recognize children for calling 9-1-1 appropriately.

Places that currently use this program have the call taker identify a call worthy of praise. After review and concurrence by the Chief, a recognition ceremony is planned for a school assembly or a Board of County Supervisors meeting. At the ceremony, the Chief or other local official (with the call taker) presents the child, who made the call, with a certificate and some sort of other award. A press release is made and the incident and award is usually carried in the local news media.

To help facilitate this program statewide, the DPSC is making available a CD with certificate templates, sample press releases, and model procedures and forms; and t-shirts and 9-1-1 teddy bears as awards. The material will be ready in November and will be free to any PSAP wanting to implement the program.

C. Future Activities

This is your chance for input into future activities for Public Education with E-911. Help us define the role the Board and DPSC should play with public education and the type of programs that would be most beneficial.

Roundtable Discussion

Notes: