

**NORTH CAROLINA GENERAL ASSEMBLY**

**LEGISLATIVE FISCAL NOTE**

**BILL NUMBER:** S.B. 1242 (Version 5 of the Bill)

**SHORT TITLE:** Wireless Telephone Service/Towers Act

**SPONSOR(S):** Senator Hoyle

<b>FISCAL IMPACT</b>					
	<b>Yes (X)</b>	<b>No ( )</b>	<b>No Estimate Available ( )</b>		
	<b>Millions</b>				
	<b><u>FY 1998-99</u></b>	<b><u>FY 1999-00</u></b>	<b><u>FY 2000-01</u></b>	<b><u>FY 2001-02</u></b>	<b><u>FY 2002-03</u></b>
<b>REVENUES</b>					
Wireless Fund	<b>14.96</b>	<b>16.46</b>	<b>18.10</b>	<b>19.91</b>	<b>21.90</b>
<b>EXPENDITURES</b>					
Administration	<b>0.15</b>	<b>0.16</b>	<b>0.18</b>	<b>0.20</b>	<b>0.22</b>
<b><u>Other Expenditure Estimates Not Possible at this Time</u></b>					
<b>PRINCIPAL DEPARTMENT(S) &amp; PROGRAM(S) AFFECTED:</b> Wireless 911 Board, Department of Administration.					
<b>EFFECTIVE DATE:</b> Sections 1 and 2 become effective 90 days after it becomes law. Appointments to the Wireless board should occur within 30 days of the effective dates of sections 1 and 2. The remainder becomes effective when it becomes law.					

**BILL SUMMARY:** The bill creates a Wireless 911 Board, establishes the Wireless Fund, and directs the board to oversee the fund's operation. An \$0.80 per month per subscriber charge on wireless customers statewide will generate revenue for the fund. Under the bill the carrier (Bell South Mobility, GTE, 360 Communications, etc.) collects the subscriber charge, and retains 1% of the total revenue to cover the costs of administration. The Wireless 911 board will also retain 1% for its expenses. The remaining revenue is distributed 60% to wireless carriers and 40% to the organizations that answer 911 calls. Of the 40% distributed to 911 organizations, 50% is divided equally among the total number of 911 organizations, and 50% is distributed according to population. The board will report to the Joint Legislative Commission on Governmental Operations and the Revenue Laws Study Committee. The board is also subject to the rule making review process. The bill also releases state agencies to lease public property for the construction of wireless communication towers.

**BACKGROUND INFORMATION:** In June 1996 the Federal Communications Commission adopted a "Report and Order," taking steps to foster major improvements in the quality and reliability of 911 services available to the customers of wireless telecommunications service providers. The new system recommended is called enhanced 911 or E911. E911 provides emergency service organizations (Public Safety Answering Points or PSAPs) with location information (ALI or Automatic Location Identification) and number of the cellular caller (ANI or Automatic Number Identification). At present wireless carriers usually provide access only to basic 9-1-1 services, which does not provide this information about cellular callers. GTE estimates that at least 25% of 911 calls made in North Carolina are from a cellular or wireless telephone.

In December of 1997 the FCC adopted a more specific Memorandum Opinion and Order. In this document the FCC outlines a two phase implementation process for E911. In Phase I of the E911 deployment, carriers are required to relay the telephone number of the originator of a 911 call (ANI), and the location of the cell site or base station receiving a 911 call (a capability often provided through a technique known as "pseudo-ANI") to the designated emergency service organization (PSAP). For E911 Phase II, the FCC adopted rules requiring that, as of October 1, 2001, covered carriers provide to the designated PSAP the location of a 911 call by longitude and latitude within a radius of no more than 125 meters in 67 percent of all cases.

The FCC also stated that their mandate only applied if: 1) a PSAP capable of receiving and utilizing the E911 information requests that are wireless carrier provides that information and 2) a mechanism for cost recovery is available. This bill is an attempt to create a cost recovery structure.

**ASSUMPTIONS AND METHODOLOGY:**

**Wireless Revenue:** The Cellular Telecommunications Industry Association (CTIA) reports 55 million wireless phones exist nationwide. CTIA estimates national cellular market penetration is 20.52% of the population. Using the CTIA estimate, North Carolina's 1998-9 population projection of 7,670,783 suggests that 1,574,045 cellular phones will be used in North Carolina in FY 1998-9. No more specific information is available because cellular telephones are a deregulated industry, and each cellular provider's customer base is proprietary information.

Under the bill each cellular customer will be charged \$0.80 per month once the legislation is enacted. Given the above estimates of the number of cellular telephones, this will generate approximately \$1,259,236 in revenue per month in 1998-9, for a 1998-9 total of \$15.11 million. Past experience suggests that the industry will grow more than 10% annually, although no market projections are available. This note assumes a 10% growth rate in the number of cellular telephones in fiscal years 1999-2000 through 2002-3.

	Customers	Monthly Rev.	Annual Rev.	Less Carrier Adm. Fee
<b>FY 1998-9</b>	1,574,045	1,259,236	15,110,832	14,959,724
<b>FY 1999-0</b>	1,731,450	1,385,160	16,621,915	16,455,696

<b>FY 2000-1</b>	1,904,594	1,523,676	18,284,107	18,101,266
<b>FY 2001-2</b>	2,095,054	1,676,043	20,112,517	19,911,392
<b>FY 2002-3</b>	2,304,559	1,843,647	22,123,769	21,902,531

The amounts under the “Less Carrier Adm. Fee” funds are placed a special Wireless Fund under the State Treasurer. One percent of the amount is used by the Board for administration.

**Wireless Costs:** Moines from the Wireless fund can be used for two types of expenses during Phase 1. First, commercial mobile radio service (CMRS) providers such as GTE, Bell South Mobility, and 360 Communications, can be reimbursed from the fund for the costs associated with the FCC Order. These costs are generally those associated with the technological changes needed to be able to 1) discover the telephone number of the caller and 2) find their approximate location - i.e. their nearest cellular tower. Because specific costs and customer information is proprietary, industry representatives are only willing to provide an average monthly cost estimate. For the larger companies, these estimates are based on a national model, and include start up and maintenance costs to be incurred between this summer and December 2001. In a consensus industry document, GTE estimates the cost for large, established providers with a large existing customer base will be between \$0.15 and \$0.27 per subscriber per month. The estimate for smaller, new competitor entrants is likely to be between \$0.20 and \$0.35 per subscriber per month. Currently there are 38 license holders in North Carolina that could apply for the funds. In the near future that number will increase to near 100. The specific types of costs are as follows:

**Non-recurring/Upfront Costs**

Switch Software/Hardware Upgrades  
 Database Development  
 Installation  
 Network Design and Connectivity  
 Map Overlay  
 Testing

**Recurring/Monthly Costs**

Database Usage and Administration  
 Routine Maintenance  
 Administrative (technical, etc.)  
 Trunkng  
 Map Updates

CMRS providers are required to submit sworn invoices to the board before reimbursement. Industry officials do not expect to begin submitting invoices until December 1998. Most industry officials expect that the transition to E911 will be gradual over the next three years. The local 911 service must request the enhanced service before the industry can begin upgrading the technology. Sixty percent (60%) of the funds in the Wireless Fund shall be used to reimburse these CMRS providers.

**PSAP Costs:** A second type of cost associated with enhanced 911 service is to the organization that answers 911 calls. These are referred to in the bill as PSAPs or public safety answering points. At present North Carolina has 258 PSAPs.

According the representatives from the National Emergency Number Association and the Association of Public Safety Communications Officials, the actual cost to upgrade center hardware and software to take enhanced 911 calls will differ dramatically. According to association representatives the cost per center will be between \$3,000 and \$300,000. The

association representatives also note that all PSAPs may not be interested in participating in the program. These PSAPs may determine that it would be more effective to forward the calls to another center, or that the local cellular load does not justify the added expense. Under the bill 40% of the fund revenue is used by the PSAPs.

**Phase II Wireless Costs:** At this point no cost estimates are available from the industry regarding the potential phase II costs.

**Communication Towers:** According to the Office of State Construction, the latest revenue estimates from the construction of communications towers comes from the Wake County Budget Office. According to Wake County, the last two towers constructed on land leased by Wake County resulted in revenue of roughly \$50,000 (\$10,000 per year over five years). Because it is not clear how many towers the state will construct, or the associated timeline, no fiscal impact estimates are possible on this portion of the bill.

Because the vast majority of information surrounding this issue is proprietary, exact start up and maintenance costs are not available. Industry representatives are not able to provide cost information on phase II at this time, as they believe the technology may change substantially by the end of 2001.

**FISCAL RESEARCH DIVISION**

**733-4910**

**PREPARED BY:** Linda Struyk Millsaps, Dwayne Pinkney

**APPROVED BY:** Tom Covington

**DATE:** August 11, 1998



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