

911 EMERGENCY TELEPHONE SYSTEMS

FISCAL IMPACT REPORT



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SUBMITTED BY:

THE ILLINOIS COMMERCE COMMISSION
THE OFFICE OF THE ATTORNEY GENERAL

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ACQUISITIONS

911 EMERGENCY TELEPHONE SYSTEMS
FISCAL IMPACT REPORT
TO GOVERNOR JAMES R. THOMPSON

Submitted by:

The Illinois Commerce Commission
The Office of the Attorney General
December, 1979

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911 FISCAL IMPACT

I. INTRODUCTION

1. Basis for Report

The basis for this report is contained in "An Act in relation to the designation of an emergency telephone number for use throughout the state" (Illinois Revised Statutes, Chapter 134, Section 31 et. seq.). Section 13 of the Act, second paragraph, reads as follows:

In December of 1979 and in December of 1980 the Commission, with the advice and assistance of the Attorney General, shall submit recommendations to the Bureau of the Budget and to the Governor specifying amounts necessary to further implement the organization of telephone systems specified in this Act during the succeeding fiscal year. The report specified in this paragraph shall contain, in addition, an estimate of the fiscal impact to local public agencies which will be caused by implementation of this Act.

2. Purpose of the 911 Act and the Commission's Duties

As stated in Section 1 of the Act, "it is the purpose of this Act to establish the number '911' as the primary emergency telephone number for use in this State and to encourage units of local government and combinations of such units to develop and improve emergency communication procedures and facilities in such a manner as to be able to quickly respond to any person calling the telephone number '911' seeking police, fire, medical, rescue, and other emergency services."

To help accomplish these purposes, the Act designates the Commission, with the advice and assistance of the Attorney General, to coordinate the planning and implementation, to provide technical and operational standards, and to assist the agencies in obtaining financial help in order to establish emergency telephone service.

The Commission submitted a progress implementation report to the 81st General Assembly in February, 1979. That report showed there were 41 operating systems in Illinois serving about 39 percent of the State's population, while 68 local public agencies serving about 58 percent of the population were in various stages of the planning process. The status of implementation has not changed significantly since the February, 1979 report. See Appendices I and II. Another progress implementation report is required in February, 1981.

3. 911 Timetable Amended

The implementation timetable originally established in the 911 Act has been revised with the enactment of Public Act 81-1122,

effective November 26, 1979 and Public Act 81-1157, effective July 1, 1980. These two new Acts notably impact not only the implementation timetable but also, as a result, the fiscal requirements for implementation.

Both Acts provide that 911 systems are no longer required to be implemented in counties with a population of less than 100,000. This means that 85 of the 102 counties, according to the 1970 census, are removed from the 911 mandate. These 85 counties represent nearly 20 percent of the State's population. Such counties or local agencies may establish a 911 system and can participate in any grant program.

Public Act 81-1122, besides removing the 911 mandate on counties with a population less than 100,000, removes the mandate on counties with a population over 100,000 until such time that a law provides local public agencies "with a specific source or sources of revenue for payment of the total costs of establishing, operating and maintaining the emergency telephone systems required by this Act." After a source of funding is provided by law, then the local public agency in counties with 100,000 or more people have one year to submit tentative 911 implementation plans to their local telephone company and to the Commission. Two years from the date of funding are allowed for the local agencies to submit a final plan on implementation, subject to approval by the Commission. Finally, a 911 system must be implemented no later than 3 years after the date of funding or by December 31, 1985, whichever is later.

4. Fiscal Implications of Recent Legislation

As noted previously, Section 13 of the Act requires the Commission to "submit recommendations to the Bureau of the Budget and to the Governor specifying amounts necessary to further implement the organization of telephone systems specified in this Act during the succeeding fiscal year." The desirability for and necessity of such recommendations to be made by the Commission were based on the premises that implementation would be mandatory and that implementation would follow the originally established timetable. Public Act 81-1157 and especially Public Act 81-1122 effectively eliminate the necessity for the Commission to submit such recommendations and, in any event, reduces such a recommendation to zero amount. There is no amount "necessary" for the implementation of 911 systems during fiscal year 1981 because the 911 mandate is now removed from all rural counties without qualification and from all urban counties until a law provides a source of funding.

Although the funding and legal pressures are now removed from the local public agencies, most public agencies still view the 911 concept as an excellent means for enhancing public safety. Therefore, as Public Act 81-1122 implies, it is desirable, if fiscally feasible, that a source or sources of revenue be pursued. Yet, for the most part, those counties and other local agencies which are in most need of financial assistance are not in a position to use any funds until fiscal year 1982 at the earliest because they generally are not far enough long in the planning process. This then leaves two possible uses for 911 funds for fiscal year 1981: Reimburse implementation, maintenance and operation costs of present 911 systems, or provide funds for those few local public agencies which

now have final or tentative plans filed with the Commission, or both. A review of these potential uses and the estimated amounts associated with such uses is presented in the next two chapters, followed by a review of statewide implementation and maintenance costs.

II. 911 COST ESTIMATIONS

1. Implementation and Maintenance Costs of Present 911 Systems.

The costs to local public agencies to operate a 911 emergency telephone system can be divided into three basic categories: implementation of equipment and lines, maintenance of equipment and lines, and, in some instances, additional operating personnel. Forty-three systems are now in operation, serving over 39 percent of the total state population and about 5.6 percent of the land area. As shown in Appendix I, size and complexity of the systems range from Chicago's sophisticated system serving about 3.4 million people to Minonk's basic system serving about 2,000 people.

The charges paid by the local public agencies, whether whole counties or small communities, to implement their own 911 systems has depended on the type or complexity of system installed, the size of the area served and the number of telephone exchanges served. By far, the most sophisticated and largest system is Chicago's, at a total implementation cost in 1976 of over \$6.3 million. On the other side of the coin, three systems were installed at no charge and six systems were installed for less than \$100. The total implementation costs for 41 systems (costs for two systems are not yet available) is \$6,330,259.

Equipment and line maintenance charges bear no relationship to implementation costs. Because some local public agencies selected small basic systems or already possessed most of the implementation equipment, their implementation costs were minimal. So, in many cases, the annual maintenance charges exceed the implementation costs. Annual maintenance charges range from about \$1,440,000 for Chicago to \$312. The total annual maintenance costs for 41 systems is currently \$1,543,030.

If reimbursement is contemplated, then maintenance costs should be calculated either from the date of system implementation or, as an alternative, from the effective date of the 911 Act. (September 25, 1975), whichever is later. If reimbursement is to be provided from the date of implementation - the earliest being Geneseo in May 1968, followed by Bloomington and Normal in February 1969 - then the total reimbursement of maintenance costs through June 30, 1980 would be about \$5,949,300. If reimbursement is to be provided from the effective date of the Act or from the date of implementation, whichever is later, then the reimbursement amount would be about \$5,828,300. It should be pointed out that over 90 percent of the total maintenance cost is a result of maintaining Chicago's sophisticated system.

Operating costs, including primarily additional personnel, might also be considered for reimbursement. However, information on this factor is minimal. This subject will be reviewed in a later chapter.

In summary, it is likely that representatives from counties and cities who have 911 systems in operation will advocate reimbursement of their costs. If funds are provided to establish and maintain "new" 911 systems, then a good argument can be advanced that it would be inequitable not to reimburse the "old" systems. And if reimbursement is to be provided, then approximately \$12.3 million is required for implementation and maintenance costs, plus possible reimbursement for additional personnel.

2. Implementation and Maintenance Costs for Agencies with Plans

Another possible alternative for use of any funds which might be made available during fiscal year 1981 is to fund those county and local public agencies which now have final or tentative plans filed with the appropriate telephone companies and the Commission. A list of such agencies is found in Appendix II.

Although seventeen systems are listed in Appendix II, it is uncertain as to how many of them would be able to use any 911 funds during fiscal year 1981. There is frequently a lengthy lag time between the filing of a tentative plan and the filing of a final plan, and then there is another delay from the final plan to implementation date. Further, even if all seventeen could use funding in fiscal year 1981, it is even at this time difficult to estimate the amount needed.

The uncertainty of funding required for the seventeen systems is due to actual type of systems to be installed (sophisticated or basic), equipment already available, inflation, revised tariffs, and other factors. Nevertheless, Commission staff roughly estimates \$10.0 million would be needed to implement all seventeen systems, over 99 percent of which would be for sophisticated systems in Cook, Lake and Will counties. Annual maintenance costs would be roughly \$2.6 million at 1979 rates.

As will be discussed in the following chapter, it may not be advisable to begin funding the implementation of new 911 systems during fiscal year 1981 until the potential for federal assistance is better known.

3. Potential for Federal Assistance

Commerce Commission staff has been actively seeking federal assistance for 911 in Illinois. The reaction of the federal agencies thus far has been positive toward the concept of using federal funds to install sophisticated 911 systems that would have national applications. If the concept is deemed expedient, Illinois may be designated as the pilot state. It is now too early to intelligently speculate on the outcome of such efforts, but the Commission should have a good idea of the possibility of federal assistance some time in 1980.

If federal funds are forthcoming, there is no doubt that the state will bear a share of the overall expenses. For example, it is unknown whether a federal grant to implement sophisticated 911 systems in urban areas will provide 100 percent funding or a 90/10 matching formula or some other method. Further, a federal grant probably would not include maintenance and operation costs. Therefore, the state and its local public agencies must in some manner indicate a willingness to maintain a statewide 911 system if such a system is to be implemented totally or partially through federal funds. Additionally, it is highly unlikely that federal funds could be used to reimburse established systems.

Because some degree of state or local funding is inevitable if a statewide 911 system is to be implemented and maintained, it would be beneficial to have a general idea of the possible costs involved. The next three chapters review this matter.

4. Implementation and Maintenance Costs for Counties with 100,000 or More Population

For planning and reasonably practical purposes, counties with a population of 100,000 or more, or projected by 1985 to have a population of 100,000 or more, are designated to implement sophisticated, selective routing 911 systems. This designation is made because of the distinct advantages of a sophisticated system in an urban area. Such advantages include faster response time, address identification, telephone number identification, and avoidance of potential geographical and political boundary problems. Many urban counties have expressed the desirability, and even the necessity, of a sophisticated system.

Appendix III indicates by telephone area code the counties which exceed the 100,000 population figure, with one exception. In the 618 area code, the Southern Illinois Law Enforcement Commission (SILEC) Region desires to be treated as one system regardless of county population. This Region is treated as a single unit for planning purposes.

The estimated implementation and maintenance costs for sophisticated systems in the urban counties shown in the following table are the best estimates known at this time. The Commission anticipates receiving proposed tariffs for selective routing from the major telephone companies in the first quarter of 1980. Once tariffs are established, then Commission staff can make more accurate estimates.

<u>Area & Counties</u>	<u>Implementation</u>	<u>Annual Maintenance</u>	<u>Total</u>
312 Area:	\$19,543,000	\$5,120,000	\$24,663,000
1. Cook County (Includes Chicago)			
2. Lake County			
3. McHenry County			
4. DuPage County			
5. Kane County			
815 Area:	3,500,000	600,000	4,100,000
1. Will County			
2. Kankakee County			
3. LaSalle County			
4. Winnebago County			
309 Area:	3,750,000	450,000	4,200,000
1. McLean County			
2. Tazewell County			
3. Peoria County			
4. Rock Island County			
217 Area:	3,500,000	400,000	3,900,000
1. Champaign County			
2. Macon County			
3. Sangamon County			
618 Area:	3,500,000	480,000	3,980,000
1. Madison County			
2. St. Clair County			
3. Monroe County			
4. Washington County			
5. Clinton County			
6. Bond County			
7. Randolph County			
TOTAL	\$33,793,000	\$7,050,000	\$40,843,000

For the purpose of presenting the total picture, the implementation figure for the City of Chicago is included in the above table. To arrive at the estimated amount needed for new implementation, the total implementation amount of \$33,793,000 may be reduced by \$6,318,000, for a revised implementation cost of \$27,475,000. Maintenance should not be reduced.

As is mentioned in the chapter on potential federal assistance, it is now unknown how much, in any, of the \$27,475,000 for implementation might be available through federal sources. Commission staff is quite certain, however, that all annual maintenance costs would have to come from state funds.

5. Implementation and Maintenance Costs for Non-Urban Areas

If the remaining 79 counties with less than 100,000 population choose to implement a 911 system, then it is likely that such counties would implement or should implement in most situations the cheaper basic 911 system. (The distinction between "would" and "should implement" is made because if money is available, then all counties would like a sophisticated system. Uneconomical resource allocation may result. If any funds are to be provided rural areas, the General Assembly or its delegate should consider guidelines as to eligibility for a sophisticated system.) Commission staff estimates 150 municipalities might find it desirable to implement their own basic system. In most cases, the key decision factor to implementing 911 systems in non-urban areas is the availability of financial assistance. Such assistance probably would need to come from state sources, not federal.

Utilizing known current average costs, a county system can be implemented at \$2,500 each and annually maintained at \$50,000, while a city system can be implemented at \$600 each and annually maintained at \$8,365. The table below summarizes these estimates.

<u>Area</u>	<u>Implementation</u>	<u>Annual Maintenance</u>	<u>Total</u>
Counties	\$197,500	\$3,950,000	\$4,147,500
Cities	<u>90,000</u>	<u>1,254,750</u>	<u>1,344,750</u>
Total	\$287,500	\$5,204,750	\$5,492,250

As provided by Public Act 81-1122 and Public Act 81-1157, the establishment of rural 911 systems is completely discretionary. This discretion, however, does not preclude counties with less than 100,000 population from participating, if they wish, in any funding assistance program. But, as mentioned above, the state is the only likely source of assistance.

6. Operating Costs

Operating costs for 911 systems primarily take the form of additional personnel. In making an application for 911 service, the Commission asks the applicant for a summary of all costs for the proposed system. Such costs, however, are not to include personnel and other items which are presently utilized or are not directly associated with the 911 call handling process. Yet, it is often difficult to state whether a new employee is added solely on account of establishing a 911 system or for some other combination of reasons.

Extremely limited information exists on the need for additional personnel. Estimating additional personnel requirements is very hazardous at this time. With few exceptions, areas with sophisticated systems should not require additional personnel. Yet, due to unique circumstances, Chicago has hired 150 persons since 1976 at an average annual salary of \$12,000 plus 17% fringe benefits. In other counties and localities, current personnel may be sufficient.

Because there is no adequate method at this time of estimating the need for additional personnel, if any, outside of Chicago, it is best at this time simply to leave this factor as an unknown quantity.

III. SUMMARY

Because of recently passed legislation, the dominant conclusions of this report is that there is no statutory necessity for the state and local public agencies to find 911 funds for fiscal year 1981 and beyond. If a source or sources of complete funding is provided by State law, only then do counties over 100,000 population face an imposition: a 3 year timetable. In short, there is no fiscal impact unless the State desires it.

The State's desire to self-impose a fiscal impact would depend, of course, on the magnitude of the impact in terms of one-time and annually recurring costs. These costs, as detailed in the preceding pages, are summarized in the table on the following page.

The total estimate of \$54,402,900 is somewhat misleading in a number of ways: It does not include certain unknown quantities, such as the possible need for additional personnel and consultants, and it is based on current rates and current dollar value. Further, the table does not portray the fact that implementation costs and possibly reimbursement costs can be spread over a number of years. It also does not import the more discretionary nature of some of the items, such as reimbursement costs of \$12,279,600 and rural system costs of \$5,492,300.

If the State elects to establish 911 systems in urban counties, the least amount the State could hope to expend is \$9,156,000 annually for maintenance and operation costs. This figure includes \$3,546,000 for Chicago's system and \$5,610,000 for the maintenance costs of new urban systems. More might be needed for additional personnel. Throughout 1980 the Commission will obtain the information necessary to judge how much, if any, will be required above the \$9,156,000 amount.

SUMMARY OF 911 COSTS

<u>Item</u>	<u>Implemen- tation</u>	<u>Annual Maintenance</u>	<u>Annual Operation</u>	<u>Total One-Time Costs</u>	<u>Recurring Costs</u>
Present Systems					
a) Reimbursement	\$ 6,330.3	\$ 5,949.3*	Unknown	\$12,279.6	\$ -
b) Ongoing - Urban	N/A	1,440.0	2,106.0	-	3,546.0
c) Ongoing - Rural	N/A	103.0	0	-	103.0
New Urban Systems	27,475.0	5,610.0	Unknown	27,475.0	5,610.0
New Rural Systems	<u>287.5</u>	<u>5,101.8</u>	<u>Unknown</u>	<u>287.5</u>	<u>5,101.8</u>
TOTAL	\$34,092.8	\$18,204.1	\$2,106.0	\$40,042.1	\$14,360.8

* Reimbursement of maintenance costs from date of system implementation to June 30, 1980.

Illinois Commerce Commission
 Report of 911 Implementation Progress
 Revised 12/11/79
 911 SYSTEMS ON LINE

911 System Answering Center	Implementation Date	Grandfathered	Area Served	Population Served (THOUSANDS)	Square Mile Area Served
1. Antioch	11/78		Antioch Lake Villa Linden Hurst	7.4	60
2. Aurora	8/79		Aurora North Aurora Montgomery Sugar Grove	90.1	136
3. Bloomington	2/69	x	Bloomington	42.0	65
4. Brookfield	10/74	x	Brookfield	20.5	20
5. Chicago	9/76	x	Chicago	3,369.0	224
6. Crystal Lake	9/74	x	Crystal Lake Lake Wood Prairie Grove	18.3	49
7. East Peoria	4/78		East Peoria Creve Coeur	24.9	45
8. Edwardsville	7/78		Edwardsville	25.0	86
9. Evanston	4/70	x	Evanston	88.0	28
10. Forest Park	6/73	x	Forest Park	15.5	9
11. Fox Lake	1/79		Fox Lake	10.7	36
12. Galesburg	1/76	x	Galesburg E. Galesburg Henderson	37.9	95
13. Geneseo	5/68	x	Geneseo	13.3	141
14. Glencoe	1/75	x	Glencoe	16.0	19

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911 System Answering Center	Implementation Date	Grandfathered	Area Served	Population Served (THOUSANDS)	Square Mile Area Served
30. Perry County	12/73	x	Pinckneyville DuQuoin St. John Tamoroa Cutler Percy Willisville Remainder of County	25.2	356
31. Plano	6/72	x	Plano	5.0	36
32. River Forest	6/73	x	River Forest	13.5	8
33. Salem	12/69	x	Salem	6.0	98
34. Tinley Park	6/75	x	Tinley Park	21.0	76
35. Tri-Com	7/76	x	Batavia Geneva St. Charles	35.0	103
36. Vandalia	9/70	x	Vandalia	6.0	86
37. Washington	5/71	x	Washington Sunnyland	16.1	55
38. Wauconda	12/78		Wauconda Island Lake Tower Lakes	8.6	27
39. Wilmette	10/75	x	Wilmette Kenilworth	35.1	22
40. Woodford Co.	12/74	x	El Paso	8.0	70
41. Woodstock	7/75	x	Woodstock	14.0	78

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911 System Answering Center	Implementation Date	Grandfathered	Area Served	Population Served (THOUSANDS)	Square Mile Area Served
15. Henry County	5/73	x	Cambridge	4.6	69
16. Highland	5/79		Highland	10.0	60
17. Highland Park	5/77		Highland Park Highwood Part of Ft. Sheridan	37.5	13
18. Jacksonville	10/78		Jacksonville So. Jacksonville	23.5	70
19. Lake Zurich	7/78		Lake Zurich Hawthorn Woods Kildeer Parts of Long Grove and Deer Park	5.6	20
20. Marengo	1/75	x	Marengo	4.3	86
21. Marseilles	3/76	x	Marseilles	6.5	68
22. Minonk	8/78		Minonk	2.0	73
23. Moline	11/74	x	Moline	46.5	37
24. Mt. Vernon	5/70	x	Mt. Vernon	17.0	131
25. Naperville	8/77		Naperville Parts of Lisle, Bolingbrook, Warren- ville and Woodridge Warrenville	31.1	73
26. Normal	2/69	x	Normal	35.0	65
27. Oak Forest	6/77		Oak Forest	21.0	8
28. Oak Park	7/73	x	Oak Park	62.5	9
29. Peoria	12/75	x	Peoria Peoria Heights Norwood	135.6	125

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 911 SYSTEMS ON LINE

911 System Answering Center	Implementation Date	Grandfathered	Area Served	Population Served (THOUSANDS)	Square Mile Area Served
42. Algonquin	4/79		Algonquin Lake-In-The-Hills	10.0	26
43. Morris			Morris Exchange	8.5	161
TOTALS:				4433.3	3,122

TENTATIVE PLANS FILED WITH THE COMMISSION AS OF 12/10/79

System	Population (Thousands)	Area Square Miles
1. Berwyn	9.6	6
2. Chenoa	3.2	87
3. Cook County	2,123.0	730
4. Countryside	5.4	4
5. Elgin	75.0	196
6. LaGrange	17.0	3
7. Lake Co. (Partial)	131.0	100
8. Menard County	97.0	312
9. Piatt County	15.5	437
10. Springfield	92.0	85
11. Wheaton	33.2	52
12. Wilmington	4.0	73
13. QuadCom	33.0	60
14. McLean	40.0	1,200
15. Union County	20.0	455
16. Will County	356.4	845
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	3,055.3	4,645

SYSTEMS IN FORMAL COMMISSION PROCEEDINGS AS OF 12/10/79

Cary	20,480	45.25
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POPULATION BY AREA CODE
FOR SELECTIVE ROUTING SYSTEMS

APPENDIX III

<u>AREA AND COUNTY</u>	<u>1970 POPULATION</u>	<u>1985 PROJECTED POPULATION</u>
<u>312 AREA:</u>		
Cook County	5,492,369	5,220,963
Lake County	382,638	576,141
McHenry County	111,555	205,290
DuPage County	491,882	803,474
Kane County	251,005	403,424
Total:	6,729,449	7,209,297
<u>815 AREA:</u>		
Will County	249,498	506,084
Kankakee County	97,250	105,995
LaSalle County	111,409	120,350
Winnebago County	246,623	284,669
Total:	704,780	1,017,098
<u>309 AREA:</u>		
McLean County	104,389	132,221
Tazewell County	118,649	142,803
Rock Island County	166,734	174,401
Peoria County	195,318	213,317
Total:	585,090	662,742
<u>217 AREA:</u>		
Champaign County	163,281	181,397
Macon County	125,010	139,651
Sangamon County	161,335	199,940
Total:	449,626	520,988
<u>618 AREA:</u>		
Madison County	250,934	273,836
St. Clair County	285,176	297,117
Monroe County	18,831	22,971
Washington County	13,780	15,603
Clinton County	28,315	31,203
Bond County	14,012	15,694
Randolph County	31,379	35,152
Total:	642,427	691,576

END