

Section 13. Future Jail and Alternative Population Scenarios

Introduction

Jurisdictions make decisions about the size facility that they need in several ways:

- Some use a statistical technique called population forecasting to help them arrive at a number by analyzing their past practices and projecting them out into the future.
- Some use another statistical technique called modeling or computer simulation to develop a picture of their future population based on modification of some current practices.

In this section, population forecasting will be used to identify a baseline population (the size facility that would be needed if the County just continues to do its “jailing business” in the future as it has in the past. The analysis will consider the impact of changes which have been developed in the last three years in that process.

Population Forecasting

Population forecasting is not an exact science. Multiple factors influence facility admissions and length of stay; these factors are influenced by law, criminal justice policy, economics and the social environment of the jurisdiction. As a result, the estimates of future capacity requirements realistically must be considered as *baselines*. A baseline forecast identifies *what the population is likely to be if the current trends continue*. While it is possible to calculate the impact of *known* changes, there are too many items that will effect the County’s criminal justice system in years to come that are simply unknowable today.

Jurisdictions typically confront this problem by two strategies:

1. Modifying the baseline to include known changes in criminal justice practices, and
2. Providing an easily expandable and adaptable building that is flexible enough to respond to change.

Methodology

Most population forecasting establishes a relationship between the population of the jurisdiction and a detention statistic (i.e., average daily population or admissions). The resulting statistics are called incarceration rates (the relationship between the population of the jurisdiction and the population in detention) or admission rates (the relationship between the population of the jurisdiction and the number of bookings). These relationships are studied over time to identify trends.

If the incarceration rate is used to project future population, the expected rate for a future year is multiplied by the expected population of that year; this provides an estimate of average daily population for that year. That result, in turn, has to be multiplied by a factor (called a peaking factor) to accommodate the daily and seasonal fluctuation in average daily population as well as classification needs. The result is the baseline capacity of the facility. If the admission rate is used to project future population, the expected rate for a future year is multiplied by the expected population of that year; this provides an estimate of future admissions. That result, in turn, has to be multiplied by the expected

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length of stay of inmates, divided by the number of days in the year, and then multiplied by the peaking factor. In this situation, if the admission rate is used a longer trend is available for admissions, increasing the likelihood of its accuracy.

Population Projections

Population projections for Scott County were provided in Section 2. They suggest that the County's population will reach 182,387 by 2025.

Incarceration Rates

Incarceration rates are among the most useful measures of how a jurisdiction uses its jail space since it allows comparison with other jurisdictions which may be of a different size. Incarceration rates express the population of the jail as a function of the county population. The result is multiplied by 100,000, to calculate the incarceration rate. The incarceration rate is similar to the crime rate in that way.

Table 13.1 Comparative Incarceration Rates

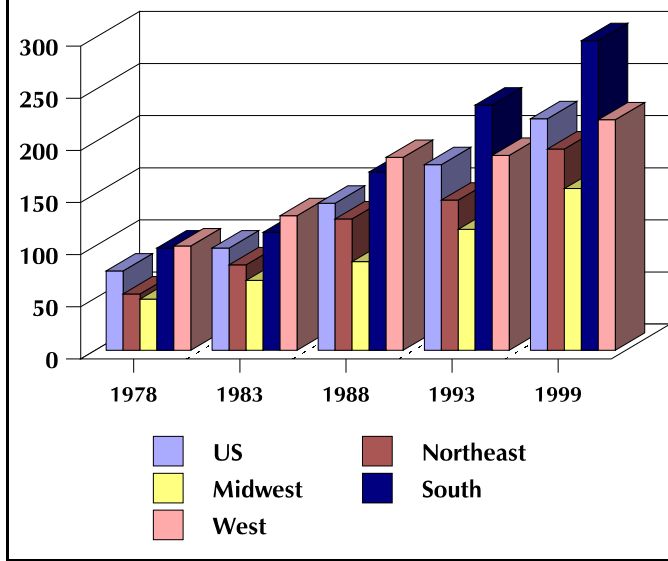
Year	US	Northeast	Midwest	South	West	Iowa	Illinois	Scott
1978	76	54	49	98	100	23	52	
1983	98	82	67	113	129	29	77	
1985	108							
1986	114							
1987	122							
1988	141	126	85	171	185	37	85	
1989	160							
1990	163							69
1991	169							82
1992	174							96
1993	178	144	116	235	187	57	116	113
1994	188							122
1995	193							135
1996	196							150
1997	212							149
1998	219							157
1999	222	193	155	297	201	104	139	148
2000	226							138

The Bureau of Justice Statistics conducts a census of the nation's jails every five years. Annually it publishes a report on prison and jail inmates at midyear. Incarceration rates are published for responding jails. Nationally, between 1978 and 1993, the incarceration rate increased 134%. There are significant differences among the regions in the US. Incarceration rates are higher in the West and the South than they are in the North and the Midwest. In the Midwest, incarceration rates have increased 136% from a low of 49/100,000 to a high of 116/100,000. It is worth noting that the Midwest's incarceration rate in 1993 was lower than the rates of the South and West in 1983. 1993 was the last year for which regional rates were reported.

Bureau of Justice Statistics Annual Census of Jails 1983, 1988, 1993 and Prison and Jail Inmates Annual Reports 1990 - 2000.

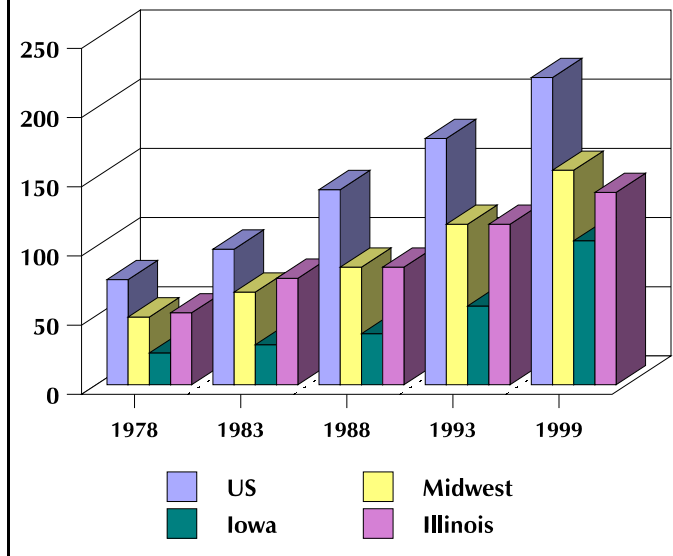
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Figure 13.1 Regional Incarceration Rates

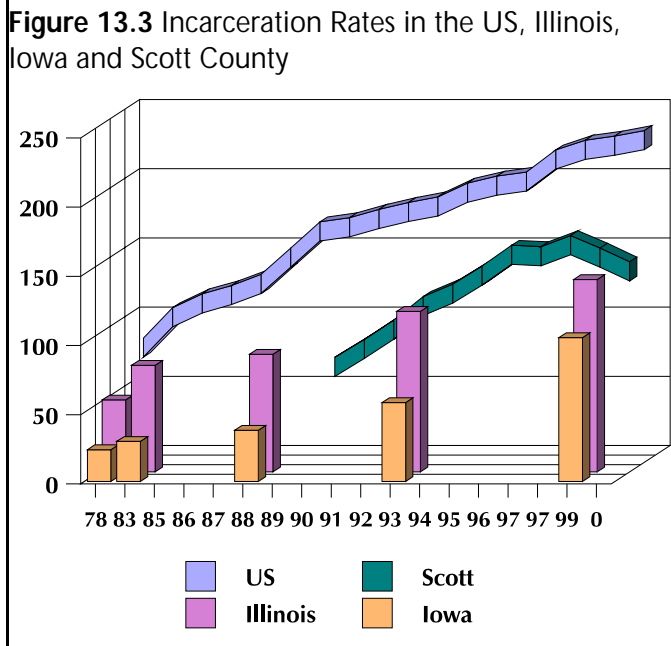


Within the Midwest, it appears that Iowa has a much lower incarceration rate than other States in the region, particularly Illinois. Figure 13.2 compares the incarceration rates of Iowa, Illinois and the US. It appears that the incarceration rate in Illinois closely parallels the regional incarceration rate. The incarceration rate in Iowa is much lower. Table 13.3 on the following page shows the trend in Scott County's incarceration rate.

Figure 13.2 US, Midwest, Iowa and Illinois Incarceration Rates



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The incarceration rate in Scott County has consistently been lower than the national average - and consistently higher than the average for the State of Iowa. As one of the metropolitan areas within the State, a higher incarceration rate should be expected. At least graphically, it appears that Scott County's incarceration rate is more like the incarceration rate in Illinois than the rate in Iowa.

Scott County's incarceration rate has doubled in the last ten years - and the current rate has decreased from its peak in 1998.

Table 13.2 shows the change in the incarceration rate per year per 100,000. Between 1991 and 1996, the incarceration rate increased each year an average of 13.5/100,000. Since 1997, the incarceration rate has decreased an average of 2.75 per 100,000 - mostly because of the large decrease in 2000.

Table 13.2 Scott County Incarceration Rate Detail

Year	County Population	ADP	Incarceration Rate/100,000	Change/Yr/100,000
1990	150,979	104.00	69	
1991	152,824	125.00	82	13
1992	154,676	149.00	96	15
1993	155,239	174.75	113	16
1994	155,788	190.34	122	10
1995	156,436	211.79	135	13
1996	157,070	235.27	150	14
1997	156,545	232.83	149	-1
1998	158,333	247.86	157	8
1999	159,458	236.43	148	-8
2000	158,668	218.78	138	-10

It is important to understand the average daily population of the facility in the context of the jail space which was available to the County as well as the capacity that was actually required. At 85% of design capacity, jails begin to experience crowding in one or more housing areas. Unlike prisons, jails can not control either the timing or the rate at which people are arrested. As a result, space for new admissions - as well as space for the various types of inmates who must be kept separate from each other - is essential. Table 13.3 compares average daily population,

actual capacity, and required capacity. The difference between required capacity and available space is also shown.

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13 Actual and Required Capacity

Year	Actual Capacity	ADP	Required Capacity	Actual - Required Capacity
1990	106	104.00	122	-16
1991	106	125.00	147	-41
1992	170	149.00	175	-5
1993	214	174.75	206	8
1994	214	190.34	224	-10
1995	214	211.79	249	-35
1996	214	235.28	277	-63
1997	214	232.83	274	-60
1998	214	248.86	293	-79
1999	214	236.43	278	-64
2000	210	218.78	257	-47
In 2000, the actual capacity floated between 208 and 212.				

Table 13.3 clearly shows the problem that Scott County faces with its jail population. Except for 1993, during the last ten years, the County has *never* had enough jail capacity. Although the County has succeeded in reducing the shortfall of beds, it continues to lack adequate space to provide for appropriate classification and segregation of inmates. This problem has been exacerbated by becoming a central booking facility, but even that change would not eliminate the need for more jail space.

Scenarios for Future Jail Space

All forecasting is based on a series of assumptions. In the opinion of the consultant, as long as the methodology used is statistically valid, it is far less significant than the assumptions which it plays out. Table 13.4 shows four scenarios for future jail populations.

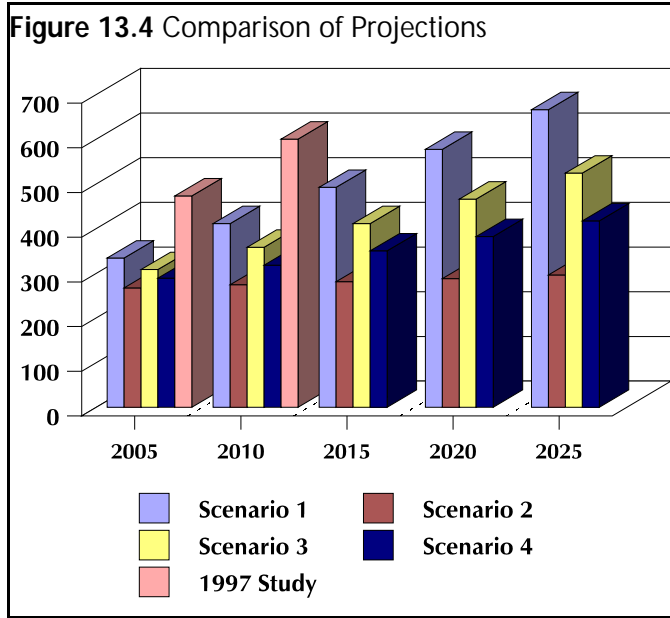
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Table 13.4 Scenarios for Future Jail Population

<i>Scenario 1 What if the system operates like it has for the last 10 years</i>				
Year	County Population	Expected Incarceration Rate	Expected ADP	Required Capacity
2005	164,580	172	283.71	334
2010	168,766	207	349.15	411
2015	173,128	241	417.91	492
2020	177,678	276	490.19	577
2025	182,387	310	566.11	666
<i>Scenario 2. What if the system operates exactly like it has in 2000?</i>				
Year	County Population	Expected Incarceration Rate	Expected ADP	Required Capacity
2005	164,580	138	226.93	267
2010	168,766	138	232.70	274
2015	173,128	138	238.72	281
2020	177,678	138	244.99	288
2025	182,387	138	251.49	296
<i>Scenario 3. What if the system allows only a 4.25/100,000 increase per year in the incarceration rate - similar to Illinois?</i>				
Year	County Population	Expected Incarceration Rate	Expected ADP	Required Capacity
2005	164,580	159	261.91	308
2010	168,766	180	304.43	358
2015	173,128	202	349.09	411
2020	177,678	223	396.02	466
2025	182,387	244	445.27	524
<i>Scenario 4. What if the system allows only a 2.25/100,000 increase per year in the incarceration rate - similar to Iowa?</i>				
Year	County Population	Expected Incarceration Rate	Expected ADP	Required Capacity
2005	164,580	149	245.45	289
2010	168,766	160	270.68	318
2015	173,128	172	297.15	350
2020	177,678	183	324.95	382
2025	182,387	194	354.08	417

These four scenarios make the same assumption about population growth - that the County will grow as anticipated by the Census. They also make the same assumption about required capacity - that the jail will operate at no more than 85% of design capacity as has been discussed in Section 11 of this report. Figure 13.4 compares the beds required for each of these scenarios as well as the 1997 projection provided in the previous study.

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The four scenarios developed in this study differ in the assumptions made. Scenario 1 is a “worst case” scenario. It suggests that the County will go back to the practices that characterized the system during the *entire* decade of the 1990’s. This shows what will happen if population management efforts are not continued when new jail space is made available. This would suggest that the County will need 666 beds by 2025. In contrast with this scenario is the 1997 projection which suggested that the County would need 600 beds *by 2010*. The previous analysis assumed that the trends which have been working in the criminal justice system would accelerate at the rates that characterized the early 1990’s.

Scenario 2 is a very optimistic scenario. It assumes that the County is able to maintain its jail population at today’s level for the next 25 years. This, in the opinion of the consultant, seems very unlikely for several reasons. First, each year there are more laws - with more associated penalties. The impact of changes in law regarding driving while barred and suspended, driving while intoxicated, and domestic violence are clearly seen in the data presented in this report. It is impossible to know what changes legislators will make fifteen years from now, and it is naive to assume that those changes will not impact the local jail. Second, it is clear from the problems that Scott County has experienced with failures to appear that a portion of the individuals who come through the system are non-compliant with the terms of the sanctions imposed. As members of CJAAC have suggested, in order to reduce incarceration in the long-term, it may be necessary to increase it in the short-term. Jail is the ultimate sanction within the local criminal justice system. It needs to be available when people fail to comply; in the absence of this option, offenders may come to think that there are no consequences for not complying with less punitive sanctions. Space needs to be available for this function.

Scenarios 3 and 4 suggest an alternative approach. Scenario 3 assumes that the incarceration rate in Scott County will grow at the rate of about 4.25 people/per 100,000 – just as the incarceration rate in the State of Illinois has grown. Scenario 4 makes the same assumption based on increases in the incarceration rate in Iowa. These scenarios suggest that Scott County will need between 350 and 411 beds by 2015, and between 417 and 524 beds by 2020.

Conclusions

1. Scott County’s incarceration rate has been below the national average incarceration rate. However, its incarceration rate is considerably higher than the average rate for the State of Iowa. Scott County has used jail more like the average for the State of Illinois - and like a more urban environment.
2. While Scott County needs to plan for 2025 capacity, there are a number of reasons why the consultant believes the County should build for a shorter time frame – about fifteen years from the time when a new facility would be available seems appropriate. Somewhere between 2015

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and 2020 capacity seems appropriate based on the amount of time required to plan, design and construct a facility. Most jurisdictions take 4-5 years to plan, build and construct a facility. Assuming that this project went forward today, it would be 2006 before the new jail would be operational. A 2010 deadline for expansion would mean that the County would *immediately* need to enter into another planning process. In the experience of the consultant, projects that close together have little chance of success.

3. Scott County will need to continue to manage its jail population aggressively. In addition, the County will need to implement programs that impact the long-term jail population.