

Future Felon Population of the State of Tennessee FY 2006-2007

FY 2006-2019 Felon Population Projections



Tennessee Department of Correction

Presented before the Select Oversight Committee on Corrections

April 2007

**Compiled by TDOC's
Division of Policy, Planning, and Research**

**Linda M. Nutt, Ph.D., Director
Cynthia Taylor, Planning and Research Coordinator**

Table of Contents

Executive Summary	1
Introduction	4
Methodology	5
Projection Assumptions	
Legislation.....	6
Locally Sentenced Capacity.....	6
TDOC Sentenced Felons in Local Jail.....	7
Admissions.....	7
Table 1: Historical and Projected Admissions.....	8
Releases.....	9
Figure 1: Parole Grant Rate FY95- FY06.....	9
Table 2: Historical and Projected Releases.....	10
Table 3: Parole Grant Rates by Model Group.....	11
Capital Projects and Renovations.....	12
Table 4: Funded TDOC Expansions.....	12
Female Population Considerations.....	12
Offense Model Groups.....	12
Table 5: Admission Statistics by Gender, FY06.....	15
Table 6: Release Statistics by Gender, FY06.....	16
Results	
Historical Felon Population.....	17
Figure 2: Annual Fiscal Year-End Population FY92-FY06.....	17
January 2006 Projection Model.....	18
Figure 3: Accuracy Assessment of the 2006 Projection Model.....	18
January 2007 Projection Model.....	19
Figure 4: Backcast Accuracy of the 2007 Projection Model.....	19
Figure 5: Backcast Accuracy of the 2007 Projection Model: Females.....	20
Population Trends.....	21
Table 7: Historical and Projected Population Trends.....	22
Figure 6: Total Felon Population Historical and Projected.....	23
January 2006 vs. January 2007 Model.....	24
Figure 7: Comparison of Projection Models.....	25
Table 8: Population Projection 2006 and 2007 Models	25
Figure 8: Comparison of Projection Models: Females.....	26
Capacity.....	26
Figure 9-11: Projected Felons, Capacity, and Unmet Bed Demand.....	28
Table 9: Unmet Demand and Projected Felon Population.....	30
Age.....	31
Figure 12: Average Felon Inmate Age FY2007 vs. FY2019.....	31
Table 10: Forecasted Offenders Aged 50+.....	32

EXECUTIVE SUMMARY

This report presents the annual projections of the Tennessee incarcerated felon population. The projection data is produced for the Tennessee Department of Correction (TDOC) by JFA Associates in Washington D.C. This report is then compiled and prepared by the Department of Correction's Policy, Planning, and Research unit.

Highlights and findings of this projection report:

Model Accuracy: An evaluation of the January 2006 felon population projection model revealed that the model performed well during the first three months of the projection year (January-March 2006), with an average monthly deviation from the actual felon population of 1.0%. During a mid-year assessment in September 2006, it was determined that as of July 1, 2006, the projected population figures generated by the model deviated from the actual felon population in Tennessee by an average of -1.7%. While the average monthly deviation continued to grow each month, it was decided that no mid-year recast was necessary as the model was still performing within the Department's range of no more than +/-2.0% annual deviation from the model. However, in the second half of the projection year (July-November 2006), the deviation between the projections and the actual population continued to increase, reflecting fewer admissions than projected. The average monthly deviation from July-November was -3.8%. The average monthly deviation of -2.6% from the 2006 model between January and November 2006, was moderated by close adherence to the model in the early months of the year.

Incarcerated Felon Population Projections

Total Population: During the past fiscal year, the total incarcerated felon population (including TDOC backup and locally sentenced felons) declined from 26,209 in June 2005 to 26,110 in June 2006, a decrease of 0.4%.

Over the past 15 fiscal years (1992-2006) the total incarcerated population has increased 83.4% (from 14,234 to 26,110), with a mean annual change of 4.4%.

Over the next 13 fiscal years (through June 2019), Tennessee's incarcerated population is projected to increase a total of 12.5% (from 26,415 to 29,714) with a mean annual change of 1.0%.

Projections by Gender

Males: The overall growth rate for male felons for the 13-year projection period is projected to be 12.3% (increasing from 24,407 in June 2007 to 27,402 in June 2019).

Females: The anticipated growth rate for female felons is higher, with a 15.1% increase expected during the 13-year projection period (from 2,008 in June 2007 to 2,312 in June 2019).

Unmet Bed Demand:

UNMET DEMAND = Projected Felon Population – Planned Capacity

Where

Planned Capacity = Number of TDOC beds available + (1,025 county jail beds for back-up felons + 4,125 local jail beds for locally sentenced felons)

Based on current growth *trends and TDOC's expansion plans*¹, the unmet demand (the number of incarcerated felons *exceeding* the number of beds) is currently projected to be 1,105 by June 2009. If the addition of 1,249 operational beds (Turney Center double celling, Morgan County expansion, and the West Tennessee and Turney Center Annex expansions) is completed by early 2009, the unmet bed demand will still be 2,552 in June 2015 and 3,645 in June 2019.

If the planned new construction is not completed, the unmet demand is projected to be 3,381 by June 2015 and will reach 4,474 by June 2019.

Males: When broken down by gender, the unmet bed demand is projected to be 833 by June 2009, assuming all planned expansions are completed and in operation as expected. By June 2019, it is anticipated that unmet capacity for males will reach 3,085.

Females: There is currently no increase in bed capacity funded for female inmates. The unmet bed demand for females is projected to be 272 by June 2009 and 560 by 2019.

Admissions: Compared to FY 2004-2005, total felon admissions for FY 2005-2006 increased by 0.9% from 14,042 to 14,162. This increase followed a 2.5% increase in admissions that was seen from FY 2004 to FY2005. In FY 05-06, new court commitments decreased by 0.2% from the static rate of increase of 0.0% (from 8,436 to 8,440) seen during the previous fiscal year. The number of probation and parole violators returned increased 2.5% during this period. This is down significantly from the 6.4% increase seen in the previous fiscal year.

Projected Admissions: Continued growth in new court commitments is expected over the next thirteen years, at the low rate of average annual change (1.0% per year). This expected rate of growth reflects a reduction in the admission rate from prior years to acknowledge the slowing admissions noted in FY 2005-06. An overall increase of 11.3% is projected to occur between 2007 and 2019. Growth in probation and parole violator returns is also expected over the next thirteen years, with an average annual change of 0.5% during the projection period, for a total increase of 6.2% between fiscal years 2007 and 2019.

Releases: Releases increased 7.5% from the previous fiscal year (FY 2004-05), with releases to probation or community corrections increasing 6.7%, releases for

expiration of sentence and other increasing 3.9%, and releases to parole showing an increase of 14.2%.

Projected Releases: Over the next thirteen years, it is anticipated that all releases (parole, probation & community corrections, expiration of sentence, and other) will increase by approximately 17.7%, with an average annual change of about 1.5% each year.

Probation and community corrections release rates are projected to increase about 28.0% between 2007 and 2019 while releases for expiration of sentence and other are expected to increase approximately 5.9% between 2007 and 2019. The growth rates projected for these two categories of release are significantly lower than their historic pattern of growth of 141.3% and 294.9% respectively.

Parole Grant Rate: During FY 2005-06, the average parole grant rate was 31.5%, up slightly from the prior year's grant rate of 29.5%.

Projected Grant Rate: Based on trends in parole grant rates over the past fiscal year, it is projected that the grant rate will remain relatively low, at approximately 33.0% over the next thirteen years, with an average annual change in parole releases of 2.0%.

Inmate Age Projections

- The two offense groups with the largest average forecasted age increases over the next thirteen (13) years are lifers with a projected increase of 8.7 years (to 50.4 years old) and sex offenses with a projected increase of 4.6 years (to 46.0 years old).
- Female inmates show a slightly higher average age increase over the projected period (from 35.6 years to 37.9 years) than male inmates (from 36.0 years to 38.2 years).

INTRODUCTION

The Tennessee Department of Correction (TDOC) produces its incarcerated felon population projections annually, with mid-year adjustments to these projections when deemed necessary.² These projections are the basis of the TDOC planning process and are used for the following key functions:

- 1) to monitor the growth of the incarcerated felon population and specific elements of that population;
- 2) to simulate the impact of various decisions and legislation for a variety of criminal justice agencies; and most importantly,
- 3) the projections become the foundation for policy and decisions concerning the Department of Correction's capital project and building plans.

The annual felon population projections and the mid-year assessment are guided by TDOC policy (114.01) and are consistent with the goals set forth in the American Correctional Association's *Standards for Administration of Correctional Agencies*, 4th Edition (Standard 2-CO-1A-09).

In September, the January 2006 model was assessed for accuracy. It was determined that the projected population figures generated by the model deviated from the actual incarcerated population by a monthly average of -1.7% through mid-year (January-June 2006), thereby meeting the Department's annual established standard of model accuracy (+/-2% margin of error). It should be noted that the deviation was greater than the generally desired range of monthly variation of +/-2% for three of the first six months of the model.

During the next five (5) months (July 2006 – November 2006), the deviation between the projections and the actual felon population continued to grow, with an average difference between the projected and actual inmate population of 4.5%.

Overall, the January 2006 projection model did not perform within the acceptable standard of model accuracy, showing a 2.6% deviation between the number of projected felons and the actual felon population from January to November 2006. The difference reached 4.3% in August; however, it should be noted that the projection model *overestimated* the actual felon population in all of the months of the projection period. The continued increases in deviations seen during the 2006 projection model year indicated a need to take a close look at the model's underlying assumptions prior to the 2007 projection model.

While the model deviated 2.6% overall from the actual felon population, the average monthly deviation for the female felon population was 5.8% between January-November 2006. As was the case with the total felon population, the actual female felon population was *less* than was projected. In fact, the projection model overestimated the female felon population at least 9.0% in four (4) of the months between January and November. It was determined that the assumptions for the female felon population needed to be adjusted once again to account for the continued increase in the deviation of the projection model from the actual female felon population.

METHODOLOGY

TDOC currently contracts with Mr. Jim Austin, Ph.D. and Ms. Wendy Naro-Ware at JFA Associates in Washington D.C. to run the Department of Correction's annual population forecasts.³ JFA Associates assist in the determination of population assumptions, works with TDOC's Policy, Planning, and Research staff to extract the necessary data, and produces the raw projection data. JFA Associates also assist in reviewing the end results of the projections and placing them into context given the Department's annual felon population forecast report and capacity determination.

Projection Software

The felon population projections presented in this report was developed using JFA Associates' Wizard 2000 simulation software as the primary projection tool. Wizard 2000 is a second-generation enhancement of the Prophet software previously used to conduct the population forecasts in this state⁴. This software is used to forecast incarcerated population projections in at least 30 of the 50 United States and is considered to be an extremely reliable and valid state-of-the-art simulation model. Each projection model is specifically designed for the context in which it is used; therefore, the Tennessee projection model is based on Tennessee criminal statutes, movement patterns in and among institutions, parole and probation patterns, etc. The model simulates the future movements of inmates through the correctional system based on key correctional information regarding offenders admitted to and released from the department in FY 2006.

Source Data

The data in this report is taken from the Tennessee Offender Management Information System (TOMIS) database and the Tennessee Felon Population Updates. Data is extracted from tapes created monthly by the Office of Information Resources. The data provided for the projection models come from the November 2006 monthly extracts. Because it typically takes 4-6 months for the data in TOMIS to "settle" (i.e., for processing most of the information that is relevant to the previous fiscal year ending in June) there may be discrepancies in information between reports presented from year to year. Thus, information reported for prior years in this report may vary slightly from what has been previously reported for those same years. Additionally, data used in the projection model may vary from the current actual data due to the aforementioned settling issues.

The incarcerated felon population projections represented in this report include all felons sentenced to incarceration for one year or more. The projections include felons sentenced to the TDOC *as well as* those sentenced to serve their time in local facilities (e.g., all felons within TDOC's jurisdiction). More specifically, this report considers those felons housed in (1) TDOC facilities, (2) local jails through local sentencing, and (3) local jails awaiting transfer to a TDOC facility ("back-up").

Information for the 2007 model was extracted from TOMIS for the period July 1, 2005 through June 30, 2006 in order to provide the most current patterns and trends of the offender population. The data reflect characteristics of the stock population, as well as

admission and release patterns, which are subsequently used to simulate offender movement through the projection period. Offender movement in the modeling process is based on a variety of variables such as: sentence length, time served, average wait time between parole hearings, and parole grant rates.

Projection Assumptions

All projection data are based on the assumptions one makes about the target population and the factors that affect said population. There are a number of assumptions which are essential to the production of the annual felon population projections. These assumptions form the foundation of the future felon-forecasting model and are reviewed biannually for accuracy and consistency. The most fundamental principle inherent to this or any projection model is that current sentencing and release practices will remain constant over the projection period. The impact of unconfirmed future events, such as the felon population implication resulting from Tennessee's adaptation to the recent Supreme Court ruling regarding sentence enhancements in jury trials, was therefore not factored into this model.

The assumptions underlying the model are assessed in a multi-stage process. Trends in the data are examined utilizing a variety of methods. In addition, TDOC staff meets with members of several state agencies (Population Projection Assumptions Committee⁵) to discuss the assumptions and their viability in light of changing trends, legislation, and policy that might affect inmate populations. Finally, review and input from JFA consultants is a critical element in developing the underlying assumptions for the felon population projections.

The primary assumptions resulting from the aforementioned process are described below.

Key Assumptions

- 1. Significant Legislation from the 2006 General Assembly.** A review of the legislation enacted during the 2006 General Assembly sessions indicated that there were Public Acts passed that could influence either sentencing structure or future felon populations. While no substantial changes were assumed in this model, TDOC will closely monitor the impact of the initiation of a technical violator diversion program for males and legislation regarding sentence credits and GED completions. Credits for GED completion will result in a 60 day decrease in the RED and expiration date. The effects of the above mentioned legislation on the felon population counts are not known at this point.
- 2. Capacity for locally sentenced offenders.** Tennessee's local jails continue to hold significant numbers of locally sentenced felons and contribute significantly to Department of Correction's capacity. There has been a great deal of growth in the size of this population over the past decade, and as a result the Assumption Committee increased the average capacity assumption from 4,000 to 4,125 for the 2006 projection model. The Assumption Committee determined that there was no need to change to this assumption for the 2007 model. Based on data from the

past four (4) fiscal years, the locally sentenced felon population is estimated to be approximately 16.9% of the total Tennessee felon inmate population.

3. **Capacity for TDOC Sentenced Felons Housed in Local Jails:** Since FY 1998-99, TDOC capacity assumptions have included estimates of TDOC-sentenced offenders housed in local jails. The projections assume that, at any one time, there will be 350 offenders with valid judgement orders but who are within the 14-day legislated transfer requirement, and 675 offenders with no judgement orders for which capacity will be provided by the local jails. This number is included in all capacity assumptions and bed demand calculations. Over the past four (4) fiscal years, this population has made up an average of 8.6% of the total Tennessee felon population.
4. **Admissions.** Total admissions system-wide⁶ remained high during FY 2005-06 at 14,162. After seeing a decrease of 2.6% from FY 2002 to FY 2003, admissions then increased 4.2%, from FY 2003-FY 2004, 2.5% from FY 2004-FY 2005 and 0.9% from FY 2005-FY 2006. For a more detailed description of historic and projected admissions, please refer to Table 1.
 - **New Commitments**⁷. New commitments for FY 2005-06 decreased 0.2% from FY 2004-05 to 2005-06 (from 8,440 to 8,421 respectively). There were no adjustments to this key assumption in the January 2006 projection model.
 - **Parole and Probation Violators**⁸. With the exception of FY 2002-03, there has been a relatively consistent increase in violators returning to TDOC since FY 1999-00). There was a 2.5% increase during this past fiscal year (2005-06).

Changes were made to the 2006 projection model to reflect past trends in parole and probation violator returns as well as expected future increases. There were no changes to this assumption for the 2007 projection model. During FY 2005-06, the average difference in projected and actual violator admissions was only 2.0%.

Table 1. Historical and Projected Admissions, 1992-2019

Fiscal year	New commitments	Violators returned	Total admissions
1991-92	6,565	2,546	9,111
1992-93	6,842	3,209	10,051
1993-94	6,104	3,700	9,804
1994-95	6,358	3,907	10,265
1995-96	6,761	3,986	10,747
1996-97	7,642	4,762	12,404
1997-98	8,284	5,153	13,437
1998-99	8,107	4,954	13,061
1999-00	8,759	4,574	13,333
2000-01	8,363	4,902	13,265
2001-02	8,337	5,155	13,492
2002-03	8,063	5,077	13,140
2003-04	8,436	5,261	13,697
2004-05	8,440	5,602	14,042
2005-06	8,421	5,741	14,162

Numeric change FY 1991-92 to FY 2005-06	1,856	3,195	5,051
Percent change FY 1991-92 to FY 2005-06	28.3%	125.5%	55.4%
Average annual percent change	2.0%	6.3%	3.3%

2006-07	8,557	5,760	14,317
2007-08	8,608	5,803	14,411
2008-09	8,660	5,867	14,527
2009-10	8,712	5,910	14,622
2010-11	8,799	5,973	14,772
2011-12	8,887	5,949	14,836
2012-13	8,976	5,944	14,920
2013-14	9,066	5,975	15,041
2014-15.	9,156	5,990	15,146
2015-16	9,248	6,013	15,261
2016-17	9,340	6,059	15,399
2017-18	9,434	6,070	15,504
2018-19	9,528	6,115	15,643

Numeric change FY 2006-07 to 2018-19	971	355	1,326
Percent change FY 2006-07 to 2018-19	11.3%	6.2%	9.3%
Average annual percent change	1.0%	0.5%	0.8. %

5. **Releases.** Total releases increased by 7.5% between FY 2004-05 and FY 2005-06. For FY 2005-06, the difference between actual (15,460) and projected (13,708) total releases was 11.3%. For a more detailed description of historic and projected releases, please refer to Table 2.

- **Probation and Community Corrections and Expiration of Sentence.** Both of these release types increased between FY 2004-05 and FY 2005-06, with probation and community correction releases increasing by 6.7% and expiration of sentence releases increasing by 3.9%. In FY 2005-06, actual probation and community corrections releases differed from projected releases by 31.1% and only 4.5% for expiration of sentences and other. Due to the large difference between projected releases and actual releases, particularly probation and community corrections releases, the model was adjusted to reflect the increase in releases that was seen during the past fiscal year.

Release to Parole. Releases to parole increased 14.2% between FY 2004-05 and FY 2005-06, marking three consecutive annual increases in this category. In FY 05-06, the average parole grant rate was 31.5%, up slightly from the prior year's grant rate of 29.5%, making it the highest grant rate in the past five years (for a graphic illustration of historical parole grant rate, please see Figure 1). Actual parole releases were 2.1% higher than projected in FY 2005-06. The assumptions for parole releases were adjusted slightly to reflect increases in the parole grant rate over the past three fiscal years. In Table 3, found on page 12, parole grant rates for FY 2005-06 are broken down by offense group.

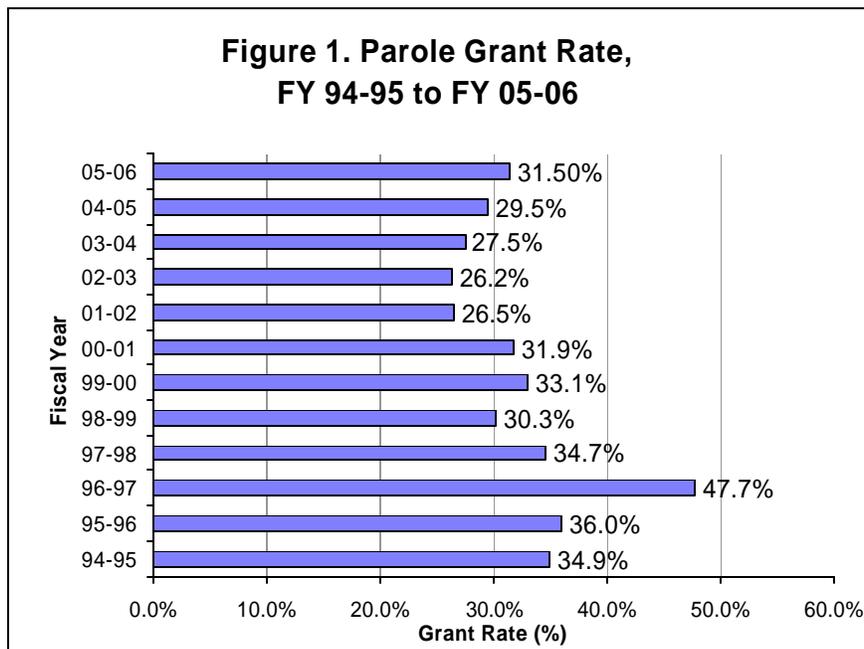


Table 2. Historical and Projected Releases, 1992-2019

Fiscal year	Parole	Probation & Community Corrections	Expiration and Others	Total Releases
1991-92	5,263	2,538	1,345	9,146
1992-93	4,907	2,778	1,600	9,285
1993-94	3,532	3,016	2,011	8,559
1994-95	3,301	3,421	2,576	9,298
1995-96	3,503	4,432	3,104	11,039
1996-97	4,581	4,989	3,300	12,870
1997-98	3,365	5,557	3,702	12,624
1998-99	3,312	5,286	4,233	12,831
1999-00	3,704	4,897	4,388	12,989
2000-01	3,763	4,953	4,231	12,947
2001-02	3,003	5,100	4,472	12,575
2002-03	2,951	5,247	4,692	12,890
2003-04	3,208	5,449	4,935	13,592
2004-05	3,524	5,739	5,113	14,376
2005-06	4,024	6,125	5,311	15,460

Numeric change FY 1991-92 to 2005-06	-1,239	3,587	3,966	6,314
Percent change FY 1991-92 to 2005-06	-23.5%	141.3%	294.9%	69.0%
Average annual percent change	-0.6%	6.8%	10.7%	4.0%
2006-07	4,369	6,106	5,396	15,871
2007-08	4,739	6,123	5,407	16,269
2008-09	4,770	6,377	5,442	16,589
2009-10	4,827	6,643	5,460	16,930
2010-11	4,867	6,876	5,466	17,209
2011-12	4,850	7,091	5,507	17,448
2012-13	4,796	7,116	5,546	17,458
2013-14	4,886	7,317	5,557	17,760
2014-15	4,934	7,447	5,569	17,950
2015-16	4,947	7,498	5,585	18,030
2016-17	5,033	7,624	5,642	18,299
2017-18	5,178	7,588	5,646	18,412
2018-19	5,153	7,817	5,713	18,683

Numeric change FY 2006-07 to 2018-19	784	1,711	317	2,812
Percent change FY 2006-07 to 2018-19	17.9%	28.0%	5.9%	17.7%
Average annual percent change	2.0%	1.9%	0.6%	1.5%

Table 3. Parole Grant Rates by Model Group, FY 2005-06

Model Group	Hearing Number					Overall	Mean Wait Time (months)
	1	2	3	4	5		
MALE							
Lifer	13.0%	28.0%	33.3%	37.5%	27.3%	23.6%	42.7
85% Person	--	--	--	--	--	--	--
85% Sex	--	--	--	--	--	--	--
85% Agg Robbery	--	--	--	--	--	--	--
Person A,B	8.5%	27.9%	33.1%	33.3%	26.4%	23.5%	29.7
Person C	9.3%	38.8%	35.0%	38.3%	44.4%	22.0%	16.0
Person D,E	8.3%	35.3%	41.7%	50.0%	--	22.0%	16.0
Sex A,B	14.6%	4.6%	2.6%	5.1%	0.0%	6.3%	44.2
Sex C,D,E	3.4%	8.5%	14.3%	--	--	5.3%	23.8
Agg Robbery A,B	7.4%	38.8%	44.7%	37.4%	43.0%	28.8%	18.4
Agg Robbery C,D,E	13.6%	34.8%	42.9%	0.0%	0.0%	23.5%	12.7
Drug A,B	15.6%	57.0%	50.7%	44.3%	41.7%	36.5%	15.5
Drug C,D,E	20.8%	50.4%	37.2%	40.3%	31.0%	30.8%	11.1
Prop A,B	22.2%	54.2%	27.3%	16.7%	37.5%	32.9%	23.9
Prop C	14.0%	42.1%	36.9%	36.7%	33.7%	26.9%	13.4
Prop D,E	16.4%	48.3%	32.0%	58.7%	33.3%	26.9%	13.4
Other A,B	8.0%	57.5%	43.6%	40.0%	25.0%	34.4%	21.6
Other C	27.9%	54.1%	36.0%	30.8%	50.0%	36.2%	10.6
Other D,E	17.8%	39.8%	33.3%	25.0%	50.0%	24.6%	13.0
Model Group	Hearing Number					Overall	Mean Wait Time (months)
	1	2	3	4	5		
FEMALE							
Lifer	--	--	--	--	--	--	--
85%	--	--	--	--	--	--	--
Person A,B	9.1%	33.3%	55.6%	0.0%	0.0%	29.3%	30.3
Person C,D,E	11.5%	48.3%	20.0%	--	0.0%	22.9%	13.7
Sex	0.0%	0.0%	--	--	--	0.0%	41.8
Agg Robbery	15.2%	47.1%	60.0%	66.7%	50.0%	37.9%	19.7
Drug A,B	15.4%	64.0%	30.8%	100.0%	--	36.3%	12.2
Drug C,D,E	28.1%	62.0%	23.5%	60.0%	0.0%	39.0%	9.8
Prop A,B	20.0%	66.7%	--	--	--	37.5%	25.4
Prop C,D,E	22.6%	60.1%	43.5%	36.8%	28.6%	35.7%	11.8
Other A,B	7.7%	57.1%	66.7%	50.0%	--	31.3%	21.4
Other C,D,E	23.9%	59.5%	45.5%	66.7%	--	38.1%	10.8
Missing	19.7%	47.6%	19.0%	50.0%	33.0%	29.4%	17.8
FY 2006 Total	14.4%	41.8%	35.9%	36.1%	31.5%	26.6%	17.5

6. **Capital Projects and Renovations.** Projects and renovations that are currently funded and scheduled for completion through the projection period (June 2019) will produce a net operating gain of 1,249 new beds (1,268 increase in total institutional capacity) in Tennessee. TDOC's operating capacity as of December 2006 was 19,670. TDOC's total operating capacity will increase to 20,919 during the projection period.⁹

Table 4. Funded TDOC Expansions

Facility	Operating Capacity Increase* (raw number of additional beds)	Planned Completion Date
Turney Center Double Celling	129 (132)	Early 2007
Turney Center	145 (148)	Early 2009
West Tennessee	146 (150)	Early 2009
Morgan County Expansion/New	829 (838)	Early 2009
TOTAL	1249 (1268)	

7. **Female Population Considerations.** With the exception of FY 1992-93 and FY 1994-95, Tennessee has seen a steady increase in the rate of growth for the female felon population since FY 1991-92. The female felon population has grown 187.9% since FY 1991-92, with a mean annual increase of 8.0%. Modifications were made in the 2006 projection model to reflect this continued growth. However, between FY 2004-2005 and FY 2005-06, the female felon population actually declined 1.6% (from 1,958 in FY 2004-05 to 1,926 in FY 2005-06).

The 2006 model deviated from the actual female felon population by an average of 5.8% between January and November 2006. It should be noted that the actual female felon population was actually *lower* than was projected. Further, the model overestimated the female felon population for all but one month during that same period.

As a result of the recent decline in the female felon population and the increasing inaccuracy of the 2006 projection model, the current model (2007) was modified to reflect a slower rate of increase.

8. Model Groups

The offense model groups, used for the forecasting model, are based on the FBI's National Incident Based Reporting System (NIBRS) method of offense classification.¹⁰ These NIBRS-based model groups are the same as those used in the prior projection models.

The model groups used in this projection model are presented below. Offenders are categorized based on their primary or most serious offense:

Sentencing Model Groups

- ▶▶ Lifers: Offenders who receive Life, Life (Minimum 25 years), Life Without Parole (includes Repeat Violent Offenders), Death, and/or Habitual Offender sentences.
- ▶▶ 85%: Offenders who are sentenced under the state's 100% sentencing statute and must serve 85% of their sentence at a minimum. It is also important to note that some offenders with life sentences also fall into the 85% offender group.
- ▶▶ 1-2 Years: This group includes those offenders who receive a 1 to 2 year sentence and who are generally sentenced to serve their time in a local facility. 1-2 Year offenders most commonly fall into drug, property, and "other" offense categories.

Offense Model Groups

- ▶▶ Drugs: This group is comprised of offenders whose primary charge is drug-related. The majority of these offenders receive sentences for cocaine-related offenses.
- ▶▶ Aggravated Robbery: This group includes those offenders receiving a primary charge of Aggravated Robbery.
- ▶▶ Sex Offenders: This group is comprised of offenders receiving a sex-related charge as their primary offense. The bulk of these offenders are sentenced for Rape and Aggravated Rape.
- ▶▶ Property Offenders: This group includes offenders whose primary charge is related to a property offense. This includes the property crimes of Arson, Bad Checks, Bribery, Burglary, Embezzlement, Extortion, Forgery/Fraud, Larceny/Theft, Motor Vehicle Theft, Robbery, and Vandalism; Aggravated Robbery is categorized separately.
- ▶▶ Person Offenders: This group includes offenders whose primary charge is related to personal offenses. This includes Homicides, Kidnapping and Assault Offenses; Sex Offenses are categorized separately.
- ▶▶ Other: This group includes offenders whose primary charge is for an offense not covered in the above categories. Under the NIBRS offense classification system, this will most often include non-substantive offenses that involve Facilitation, Solicitation, Conspiracy, etc (e.g., Conspiracy To Commit Rape).
- ▶▶ Juveniles: The number of offenders under the age of 18 admitted to the Department peaked in FY 1996-97. Since that point, both the admissions and total population of juvenile offenders have declined substantially. In prior years, a forecast of the juvenile population was conducted; however, because the projection model does not "age out" offenders, the projection of these

offenders has been seriously overestimated in past reports. Until such time as a reliable projection for these offenders is available, the report will only track the total population of these offenders over time.

These model groups are further delineated by gender. This allows the Department to gain better information on the number and type of women coming into its jurisdiction. Female felons are an increasingly important population issue facing the Department as their growth rate is substantially higher than that of incarcerated males, and projecting this particular population will assist in future capacity and program planning efforts.

To provide a clearer picture of these model groups, Tables 5 and 6 show the distribution and sentencing profiles of total admissions and releases by gender system-wide (for both TDOC and locally sentenced felons) across the model groups for the period July 2005 through June 2006. One of the basic assumptions of the projection process is that future admissions will be similar to these population characteristics.

Table 5. Tennessee Population Projections ADMISSION Statistics by Gender, FY 2005-06

Model Group	Frequency	Percent	Mean Sentence (MO)	Mean Jail Days	% to PED
MALE					
Lifer	105	0.7%	543.0	761.0	100%
85% Person	118	0.8%	262.3	584.8	96%
85% Sex		0.0%	187.2	314.2	96%
85% Agg Robbery	23	0.2%	234.0	465.7	73%
1-2 yr Person	322	2.3%	21.6	148.7	97%
1-2 yr Sex	156	1.1%	19.4	105.2	30%
1-2 yr Agg Robbery	13	0.1%	19.9	282.5	30%
1-2 yr Drug	507	3.6%	20.2	92.5	30%
1-2 yr Prop	1,435	10.1%	21.2	109.5	30%
1-2 yr Other	856	6.0%	18.9	88.8	30%
Person A,B	233	1.6%	236.6	390.0	32%
Person C	893	6.3%	66.0	237.3	31%
Person D,E	124	0.9%	53.4	170.2	31%
Sex A,B	56	0.4%	172.5	257.2	32%
Sex C,D,E	162	1.1%	69.5	213.9	32%
Agg Robbery A,B	657	4.6%	167.5	365.3	29%
Agg Robbery C,D,E	78	0.5%	65.6	192.0	32%
Drug A,B	1,040	7.3%	124.6	179.3	30%
Drug C,D,E	1,662	11.7%	60.0	134.3	30%
Prop A,B	35	0.2%	178.3	281.1	30%
Prop C	1,753	12.3%	74.0	199.2	31%
Prop D,E	1,177	8.3%	61.0	147.9	32%
Other A,B	86	0.6%	163.2	406.4	30%
Other C	176	1.2%	63.0	209.6	30%
Other D,E	385	2.7%	51.0	141.6	33%
FEMALE					
Lifer	17	0.1%	540.0	852.7	100%
85%	19	0.1%	250.1	385.2	78%
1-2 yr Person	51	0.4%	21.3	88.8	30%
1-2 yr Sex	8	0.1%	16.5	38.5	31%
1-2 yr Drug	70	0.5%	22.1	64.9	30%
1-2 yr Prop	423	3.0%	21.0	62.6	30%
1-2 yr Other	161	1.1%	20.6	88.7	30%
Person A,B	11	0.1%	183.3	189.7	28%
Person C,D,E	114	0.8%	63.3	157.5	31%
Sex	3	0.0%	76.0	68.0	36%
Agg Robbery	38	0.3%	133.2	441.0	33%
Drug A,B	117	0.8%	120.0	165.6	30%
Drug C,D,E	300	2.1%	56.3	85.1	30%
Prop A,B	5	0.0%	120.4	66.6	28%
Prop C,D,E	501	3.5%	58.1	116.5	31%
Other A,B	24	0.2%	153.1	361.9	30%
Other C,D,E	108	0.8%	50.5	109.5	30%
Missing	1	0.0%	210.0	731.7	73%
TOTAL	14,023	98.6%	73.0	176.7	33%

Table 6. Tennessee Population Projections RELEASE Statistics by Gender, FY 2005-06

Model Group	Frequency	Percent	Mean Time Served (months)	Mean Time Served by Release Type (months)				
				Expire	Other	Parole	Probation	Community Correction
MALE								
Lifer	68	0.4%	300.2	--	118.7	302.9	--	--
85% Person	18	0.1%	70.6	84.9	19.4	86.2	17.8	--
85% Sex	99	0.6%	88.3	94.6	34.4	86.1	86.2	--
85% Agg Robbery	2	0.0%	82.5	--	71.5	93.4	--	--
1-2 yr Person	307	2.0%	10.8	17.7	1.8	12.0	8.2	7.0
1-2 yr Sex	133	0.9%	10.6	15.2	14.0	9.6	9.1	3.6
1-2 yr Agg Robbery	36	0.2%	12.0	13.3	5.7	--	11.8	--
1-2 yr Drug	489	3.2%	8.4	13.5	4.7	8.5	7.1	6.1
1-2 yr Prop	1,454	9.5%	10.0	15.8	3.8	9.4	7.3	7.5
1-2 yr Other	921	6.0%	8.8	13.9	5.6	14.6	6.8	11.9
Person A,B	359	2.4%	154.6	149.2	91.4	162.1	128.9	57.7
Person C	925	6.1%	45.7	46.9	19.7	61.3	22.6	24.2
Person D,E	161	1.1%	26.2	30.1	39.1	31.8	19.5	9.1
Sex A,B	101	0.7%	167.8	174.6	--	176.7	15.7	6.2
Sex C,D,E	167	1.1%	39.9	46.6	26.6	48.2	19.0	22.3
Agg Robbery A,B	828	5.4%	98.6	108.8	37.9	92.9	111.6	143.5
Agg Robbery C,D,E	500	3.3%	44.9	47.7	32.5	53.0	26.4	27.1
Drug A,B	1,106	7.3%	54.9	89.9	30.7	63.0	20.4	14.7
Drug C,D,E	1,734	11.4%	29.4	36.5	14.8	32.9	20.9	18.4
Prop A,B	34	0.2%	74.5	113.5	79.8	57.1	--	6.9
Prop C	1,507	9.9%	43.9	48.9	30.6	51.4	26.8	17.7
Prop D,E	1,309	8.6%	30.3	34.7	19.5	35.4	18.6	15.3
Other A,B	116	0.8%	68.1	86.3	35.8	67.9	39.3	12.3
Other C	181	1.2%	33.5	42.8	33.2	34.7	22.2	13.0
Other D,E	441	2.9%	27.1	30.7	7.6	27.2	16.1	28.3
FEMALE								
Lifer	0	0.0%	--	--	--	--	--	--
85%	5	0.0%	86.8	124.6	--	77.4	--	--
1-2 yr Person	48	0.3%	8.8	15.0	--	--	6.6	13.4
1-2 yr Sex	7	0.0%	7.0	13.4	--	--	5.9	--
1-2 yr Drug	73	0.5%	11.0	14.2	--	6.0	10.9	5.8
1-2 yr Prop	408	2.7%	8.7	13.3	1.8	7.6	7.2	7.2
1-2 yr Other	160	1.1%	7.5	12.4	13.7	12.3	6.7	4.3
Person A,B	20	0.1%	113.6	97.7	--	144.2	10.6	6.1
Person C,D,E	103	0.7%	27.4	33.9	--	30.0	15.6	17.2
Sex	4	0.0%	33.1	32.5	--	48.9	--	2.0
Agg Robbery	90	0.6%	52.8	57.0	45.7	56.3	29.2	24.9
Drug A,B	108	0.7%	52.3	86.8	0.3	46.6	8.9	24.8
Drug C,D,E	314	2.1%	23.5	30.1	39.2	28.2	30.1	10.7
Prop A,B	5	0.0%	44.5	71.1	--	48.7	5.2	--
Prop C,D,E	544	3.6%	29.7	38.3	19.8	32.9	18.6	13.9
Other A,B	19	0.1%	56.1	76.9	55.4	51.4	--	--
Other C,D,E	151	1.0%	22.4	27.6	--	29.0	12.9	5.9
Missing	180	1.3%	48.4	95.8	15.0	68.0	18.6	3.1
TOTAL	15,235	100%	40.1	47.5	23.8	63.7	12.8	18.0

RESULTS

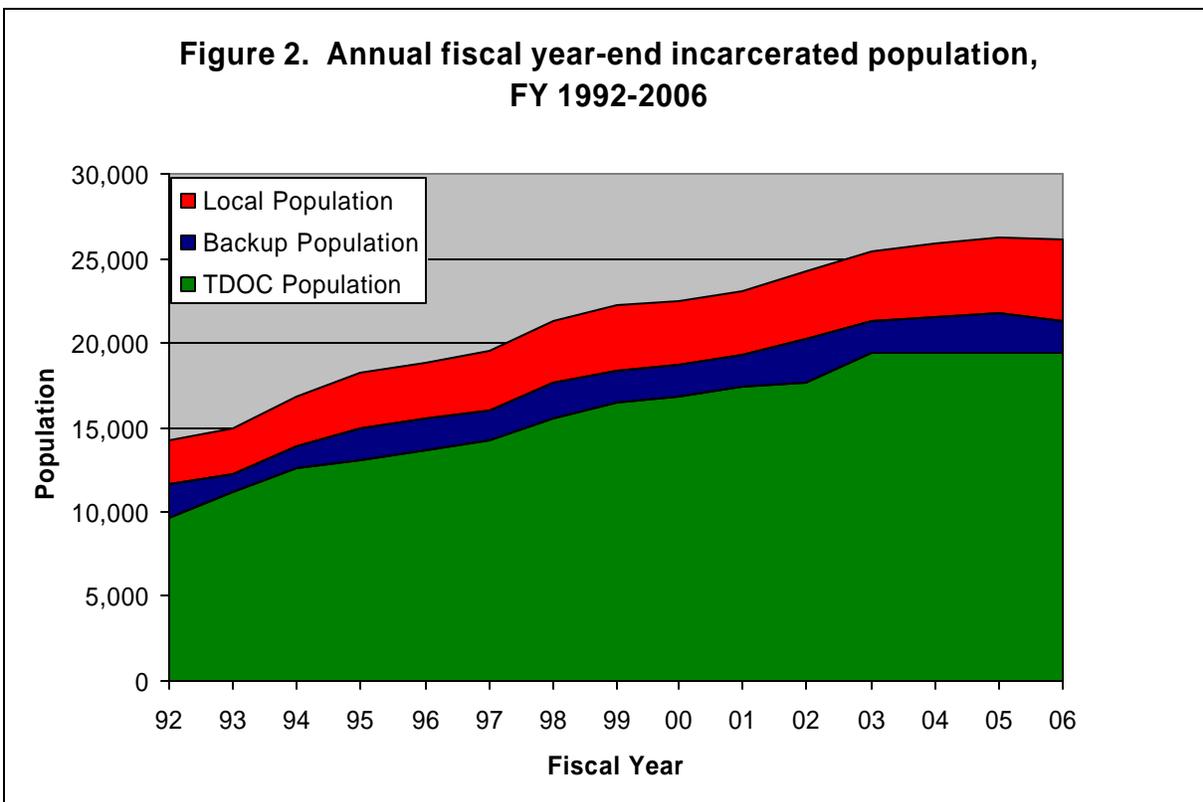
Historical Felon Population

Figure 2 demonstrates the growth of the incarcerated felon population in Tennessee from FY 1991-92 to FY 2005-06. During that period, the total incarcerated felon population (at fiscal year end) grew from 14,234 in FY 1991-92 to 26,110 in FY 2005-06, an increase of 83.4%. The average annual change over the last 15 years was 4.4%. However, the felon population declined 0.4% during the last fiscal year.

- The population incarcerated in a TDOC facility grew from 9,651 in FY 1991-92 to 19,429 in FY 2005-06, an increase of 101.3%.
- TDOC backup, although fluctuating over the last fifteen years, was 4.2% lower in FY 2005-2006 than in FY 1991-92, decreasing from 1,957 in June 1992 to 1,874 by June 2006.

Further, TDOC backup decreased 19.3% during the past fiscal year (from 2,321 to 1,874). This represents the lowest fiscal year end total for backup since FY 1998-99 and the second lowest total during the past 15 years.

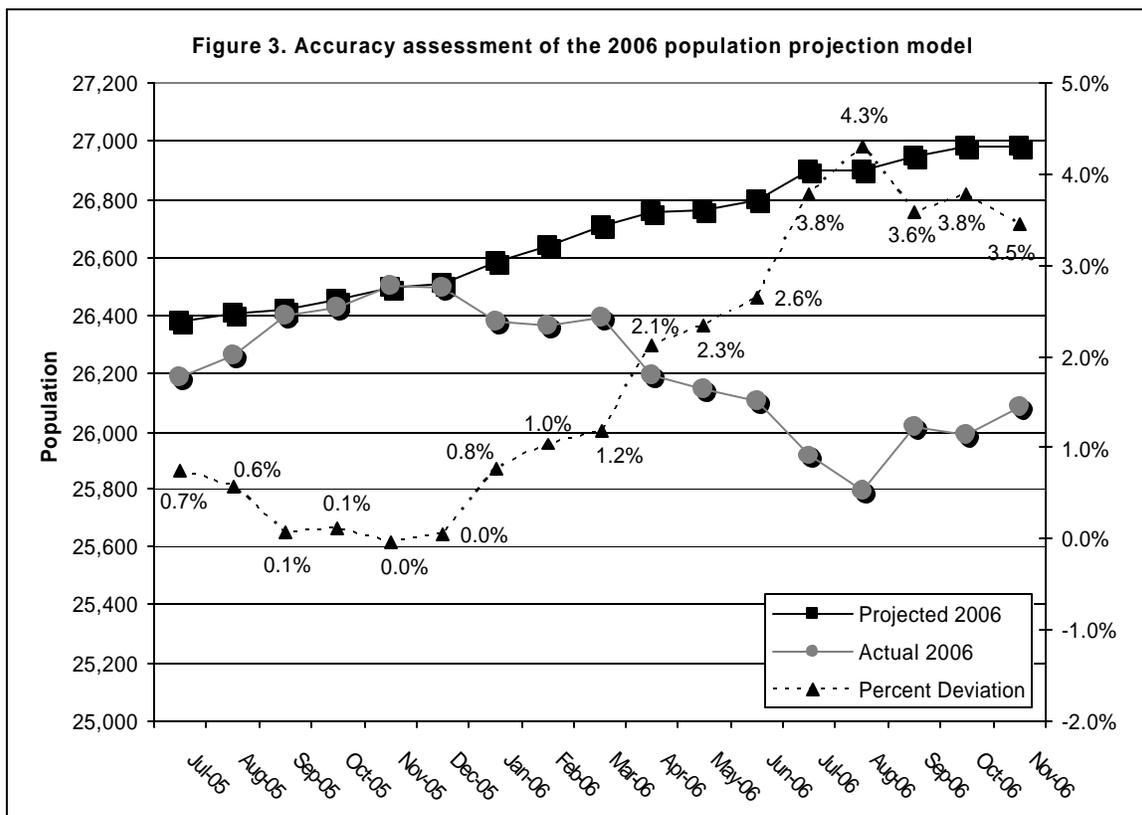
- Locally sentenced felons have increased 83.1% from 2,626 at the end of FY 1991-92 to 4,807 at the end of FY 2005-06 and 7.9% (from 4,456 to 4,807) between FY 2004-05 to FY 2005-06.



The January 2006 Projection Model

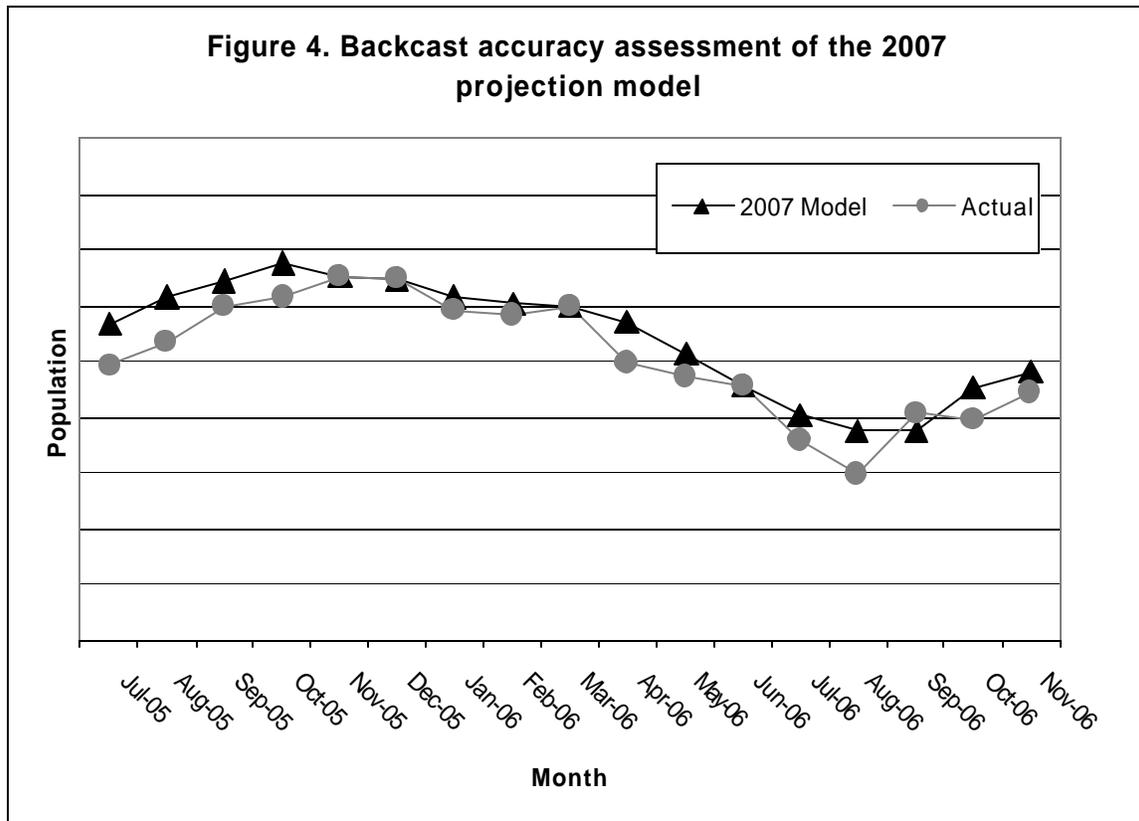
The 2006 model did not perform within the Department's annual standard of model accuracy of +/-2% margin of error. Modifications were needed to ensure the accuracy of the Tennessee population projection model in 2007. The average monthly error rate for the January 2006 model (from January 2006 through November 2006) was 2.6%. The generally desired range of monthly variation of +/-2.0% was exceeded in nine (9) of the eleven months. It should be noted however that the population was less than projection in all months during this period, indicating the model overestimated the expected population for the year.

The dotted line in the figure 3 (values reflected on the right hand axis) shows the margin of error between the actual and projected population for the January 2006 projection model.

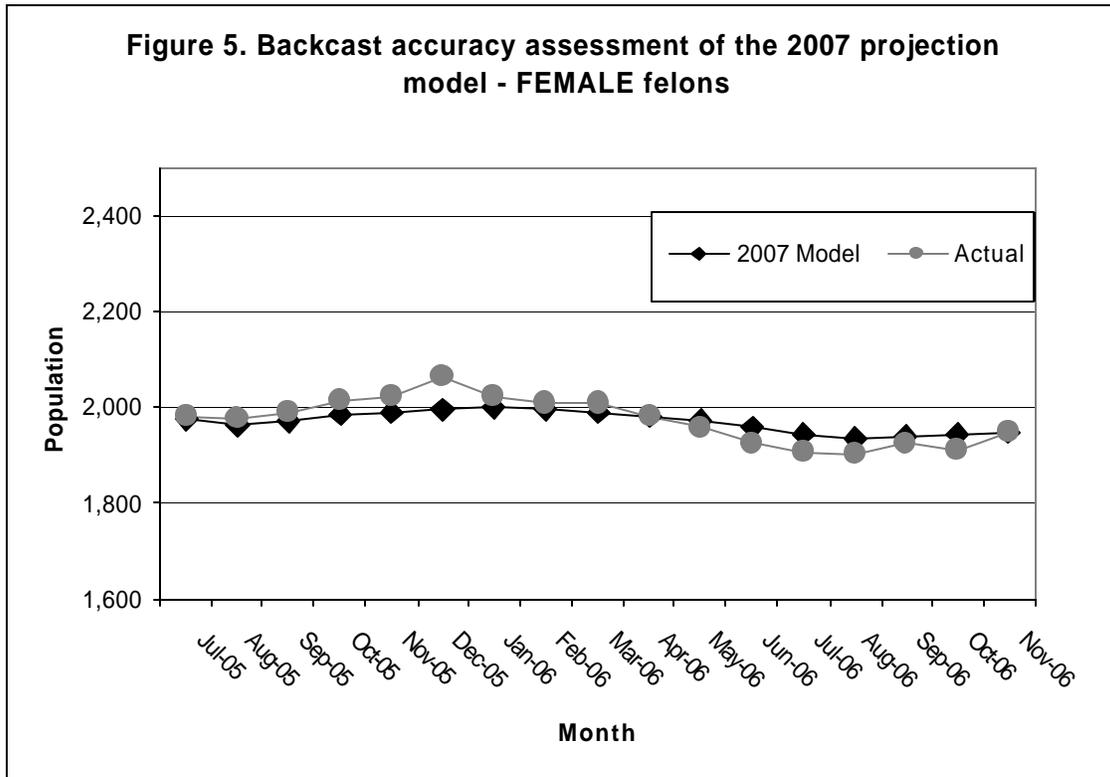


The January 2007 Projection Model

In contrast to the January 2006 model, Figure 4 presents an accuracy assessment of the new January 2007 felon population projection model when “backcast”, or compared to the prior year’s population figures. The “backcast” uses the current model to retrospectively project data from the last fiscal year to the actual population figures during the same period. This process acts as an accuracy check on the current model. The overall fit of the current model to the prior year data provides an average margin of error of -0.3%, indicating a slightly smaller population than projected.



As was mentioned in the discussion of model assumptions, the female felon inmate population actually declined during FY 2005-06. Modifications were made in the 2007 projection model to reflect a slightly lower incarceration rate of females (see Figure 5). Similar to the backcast of the total population model, the overall fit of the January 2007 model to the prior fiscal year data has an average margin of error of -0.2%.



Population Trends

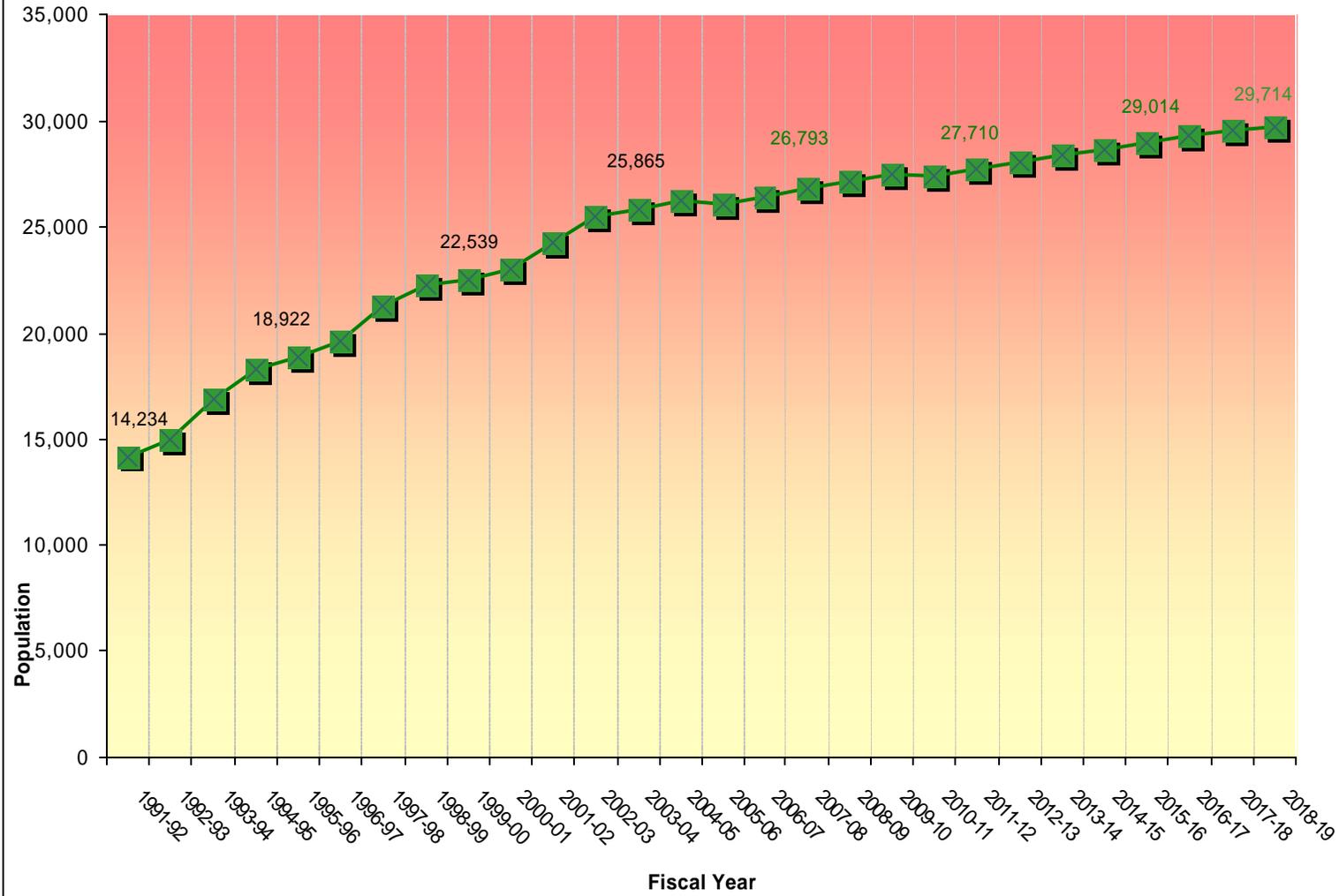
Table 7 and the corresponding graphic representation, Figure 6, detail the historical and the 13-year projected growth in the Tennessee felon population using the new January 2007 projection model. The incarcerated population is expected to increase 12.5% from June 2007 through June 2019 (from 26,415 in FY 2006-07 to 29,714 in FY 2018-19). The average annual percent change of 1.0% over the projection period is substantially lower than the 4.4% annual percent change seen during the past 15 years.

Tennessee, like many other states across the nation, is clearly showing a lower growth rate than in past years. However, the reader is cautioned to note that while there is a projected decrease in the rate of growth, this population is still expected to grow or increase by 3,299 persons over the next 13 years.

Table 7. Historical and Projected Population Trends, FY 1992-2019

Fiscal Year	Population and % change at fiscal year-end					
	Total Population	% Change	Male Population	% Change	Female Population	% Change
1991-92	14,234		13,565		669	
1992-93	15,038	5.6%	14,240	5.0%	798	19.3%
1993-94	16,884	12.3%	16,187	13.7%	697	-12.7%
1994-95	18,300	8.4%	17,460	7.9%	840	20.5%
1995-96	18,922	3.4%	18,107	3.7%	815	-3.0%
1996-97	19,606	3.6%	18,506	2.2%	1,100	35.0%
1997-98	21,286	8.6%	20,050	8.3%	1,236	12.4%
1998-99	22,287	4.7%	20,980	4.6%	1,307	5.7%
1999-00	22,539	1.1%	21,131	0.7%	1,408	7.7%
2000-01	23,062	2.3%	21,591	2.2%	1,471	4.5%
2001-02	24,235	5.1%	22,637	4.8%	1,598	8.6%
2002-03	25,469	5.1%	23,673	4.6%	1,796	12.4%
2003-04	25,865	1.6%	23,973	1.3%	1,892	5.3%
2004-05	26,209	1.3%	24,251	1.2%	1,958	3.5%
2005-06	26,110	-0.4%	24,184	-0.3%	1,926	-1.6%
Numeric change FY 1991-92 to FY 2005-06	11,876		10,619		1,257	
Percent change FY 1991-92 to FY 2005-06		83.4%		78.3%		187.9%
MEAN annual percent change		4.4%		4.2%		8.0%
2006-07	26,415	1.2%	24,407	0.9%	2,008	4.3%
2007-08	26,793	1.4%	24,796	1.6%	1,997	-0.5%
2008-09	27,174	1.4%	25,150	1.4%	2,024	1.4%
2009-10	27,449	1.0%	25,395	1.0%	2,054	1.5%
2010-11	27,380	-0.3%	25,349	-0.2%	2,031	-1.1%
2011-12	27,710	1.2%	25,617	1.1%	2,093	3.1%
2012-13	28,073	1.3%	25,984	1.4%	2,089	-0.2%
2013-14	28,403	1.2%	26,241	1.0%	2,162	3.5%
2014-15	28,621	0.8%	26,427	0.7%	2,194	1.5%
2015-16	29,014	1.4%	26,774	1.3%	2,240	2.1%
2016-17	29,280	0.9%	27,029	1.0%	2,251	0.5%
2017-18	29,566	1.0%	27,260	0.9%	2,306	2.4%
2018-19	29,714	0.5%	27,402	0.5%	2,312	0.3%
Numeric change FY 2006-07 to FY 2018-19	3,299		2,995		304	
Percent change FY 2006-07 to FY 2018-19		12.5%		12.3%		15.1%
MEAN annual percent change		1.0%		1.0%		1.4%

Figure 6. Total Felon Population (Historical and Projected), 1992 - 2019



Male Felons

According to the 2007 projection model, the male felon population is expected to increase 12.3% from FY 2006-07 to FY 2018-19 (from 24,407 to 27,402). The average annual projected change of 1.0% is considerably lower than the male felon growth rate in the past decade (4.2%).

Female Felons

This projection model forecasts a lower overall growth rate for female inmates as compared to the former forecasting model. The 2006 model projected a female felon population of 2,466 in FY 2016-17. The current model projects a population of 2,251 in 2016-17, an 8.7% decrease from the previous model's projection. During the 13 year projection period, this population is expected to increase by 15.1% (from 2008 in FY 06-07 to 2,312 in FY 2018-19). As we have seen in previous forecasting models, the female felon population is projected to grow at a slightly higher rate than the male population, with a projected average annual change of 1.4%. This projected annual percent change is significantly smaller than the average annual percent change between FY 1991-92 and 2005-06 (8.0%).

The female population has historically shown a considerably greater growth rate than the male population (see Table 7). The number of incarcerated female felons in Tennessee has increased 187.9% over the 14-year period since FY 1991-92, with an average annual growth that is almost double that of male felons (8.0% vs. 4.4%, respectively). According to the January 2007 projection model however, this disparity in growth rates between the genders will narrow (1.0% vs. 1.4% respectively).

January 2006 vs. January 2007

Figure 7 presents a comparison of the fiscal year-end average of the total incarcerated population presented in the January 2006 projection model and the new January 2007 population projection model. The dotted line graphically represents the difference between the models.

The models have very different trajectories starting in FY 2009-10 as the 2007 model assumes a much lower rate of growth than the 2006 model. Both models project an increase in inmate population for males and females through 2017, however, the 2007 model projects a much lower overall growth for both males and females than did the 2006 model (for a more detailed comparison please refer to table 8).

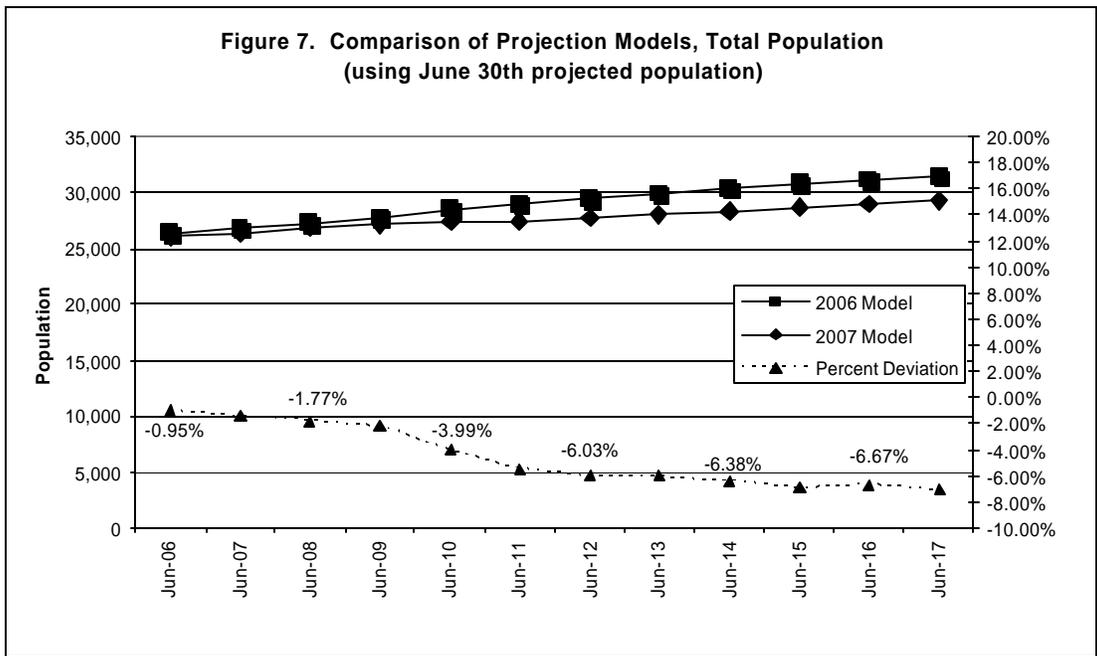


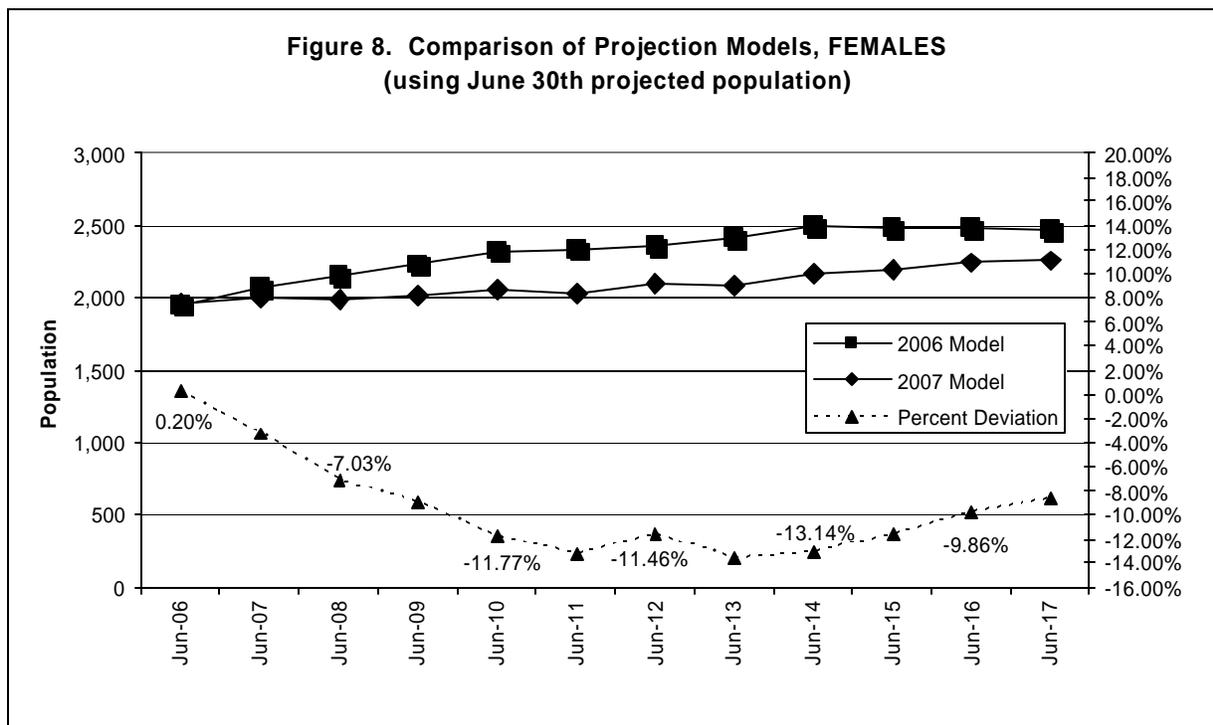
Table 8. Population Projection 2006 and 2007 Model using Fiscal Year-End Totals

Fiscal Yr	Males				Females			
	2006	2007	Difference	% diff	2006	2007	Difference	% diff
2006	24,406	24,152	-254	-1.04%	1,955	1,959	4	0.20%
2007	24,725	24,407	-318	-1.29%	2,075	2,008	-67	-3.23%
2008	25,128	24,796	-332	-1.32%	2,148	1,997	-151	-7.03%
2009	25,578	25,150	-428	-1.67%	2,224	2,024	-200	-8.99%
2010	26,261	25,395	-866	-3.30%	2,328	2,054	-274	-11.77%
2011	26,643	25,349	-1,294	-4.86%	2,342	2,031	-311	-13.28%
2012	27,123	25,617	-1,506	-5.55%	2,364	2,093	-271	-11.46%
2013	27,462	26,984	-1,478	-5.38%	2,419	2,089	-330	-13.64%
2014	27,848	26,241	-1,607	-5.77%	2,489	2,162	-327	-13.14%
2015	28,278	26,427	-1,851	-6.55%	2,482	2,194	-288	-11.60%
2016	28,601	26,774	-1,827	-6.39%	2,485	2,240	-245	-9.86%
2017	29,051	27,029	-2,022	-6.96%	2,466	2,251	-215	-8.72%

Total				
Fiscal Yr	2006	2007	Difference	% diff
2006	26,361	26,111	-250	-0.95%
2007	26,800	26,415	-385	-1.44%
2008	27,276	26,793	-483	-1.77%
2009	27,802	27,174	-628	-2.26%
2010	28,589	27,449	-1,140	-3.99%
2011	28,985	27,380	-1,605	-5.54%
2012	29,487	27,710	-1,777	-6.03%
2013	29,881	28,073	-1,808	-6.05%
2014	30,337	28,403	-1,934	-6.38%
2015	30,760	28,621	-2,139	-6.95%
2016	31,086	29,014	-2,072	-6.67%
2017	31,517	29,280	-2,237	-7.10%

Table 8 shows that for the male population, the new projected population totals are consistently lower in the 2007 model. The 2007 model has an average annual difference, or decrease, of 1,149 felons when compared to the 2006 model.

New projection estimates for the female felon population are also consistently lower than what was projected in the 2006 model (please see Figure 8). The 2007 model reflects an average annual difference, or decrease, of 223 female felons as compared to the 2006 model.



CAPACITY

The following assumptions must also be kept in mind when considering capacity and bed demand:

1. TDOC felons backed up in local jails with valid judgment orders and meeting the 14-day requirement are accounted for in capacity needs.
2. A capacity of 4,125 beds in jails throughout Tennessee for locally sentenced felons has also been added to the department's anticipated capacity.
3. All planned and *funded* TDOC building projects in the next 10 years are included in capacity assumptions unless stated otherwise.

Based on these assumptions (see Table 9), the data show that the unmet demand (or more persons than available beds) will reach 1,105 by June 2009 (833 males and 272 females). *Even if the additional 1,249 operational beds that are planned by early 2009 are completed as planned, the unmet demand will still be 1,311 (1,032 males and 279 females) by the end of FY 2011.*

By June 2015, this unmet demand figure will increase to 2,552 (2,110 male and 442 female) even if the expansions (Morgan County, West Tennessee State Penitentiary and Turney Center) are completed as planned. This figure increases to 3,645 (3,085 males and 560 females) by June 2019.

Figures 9-11 graphically represent the relationship among the felon population and the Department of Correction's operating capacity (including estimated local jail capacity) with funded expansions (see Table 4) through June 2019. The unmet demand, or the difference between the projected population and the Department's operational capacity, is graphically represented at the bottom of the charts.

While the rate of growth for the felon population has decreased over the past year, the population is still expected to increase 12.5% over the next 13 years. Due to population growth expectations, the Department of Correction in cooperation with the Board of Probation and Parole is tasked with planning for the housing, programming, medical and psychological treatment, and community reentry of an increasing number of felon inmates. The Department is committed to exploring innovative, best-practice options that result in positive outcomes in other states to supplement and even replace additional prison bed construction.

Figure 9. Total Projected incarcerated felon population, capacity assumptions and unmet bed demand, June 2006 - June 2019

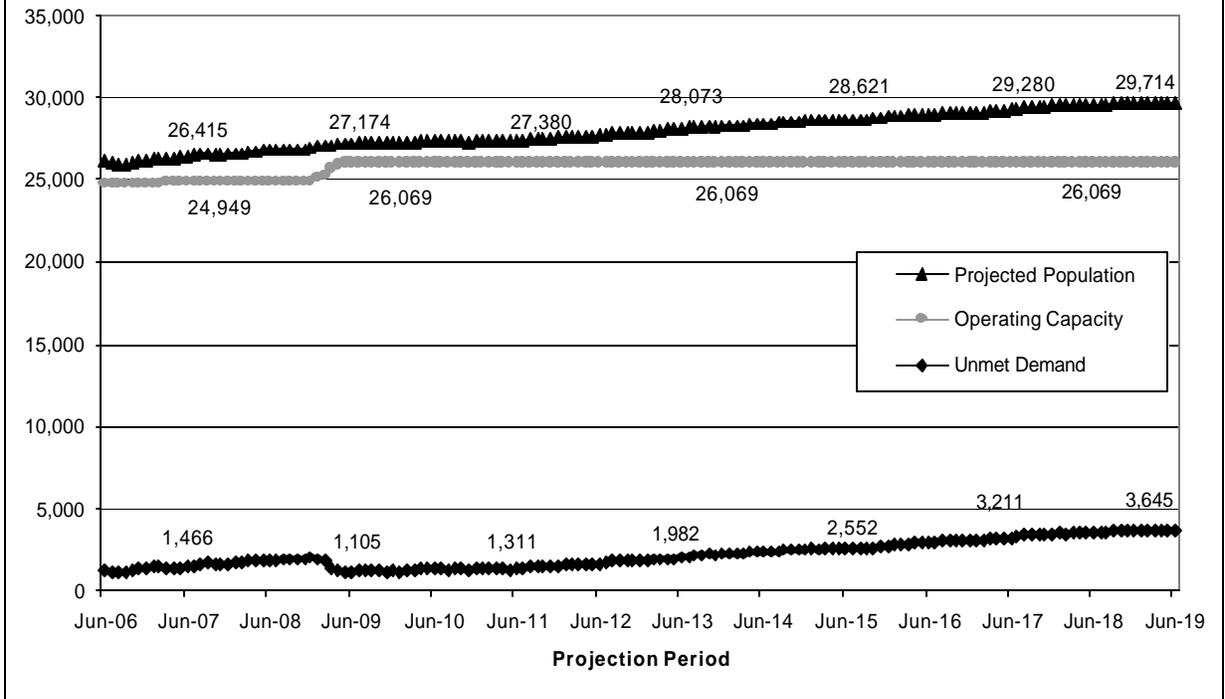


Figure 10. Projected incarcerated MALE population, capacity assumptions and unmet bed demand, June 2006 - June 2019

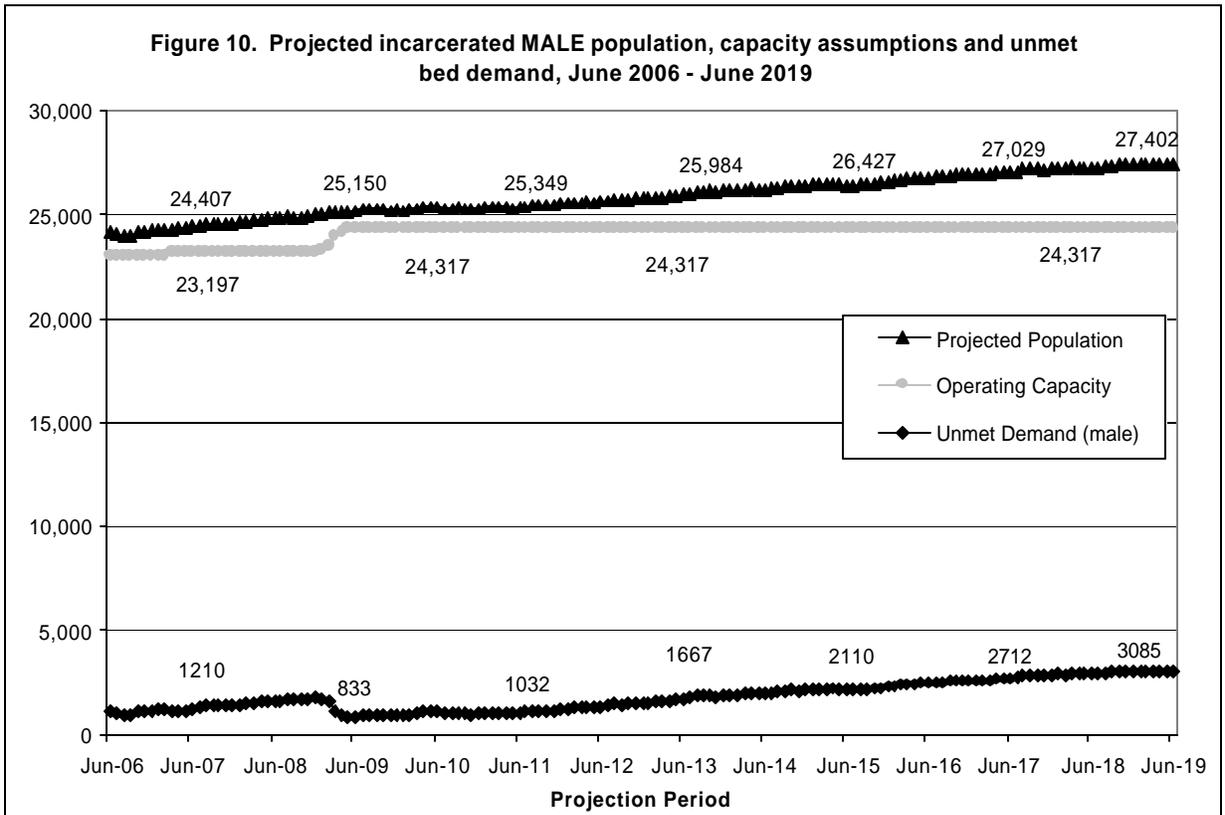


Figure 11. Projected incarcerated FEMALE population, capacity assumptions and unmet bed demand, June 2006 - June 2019

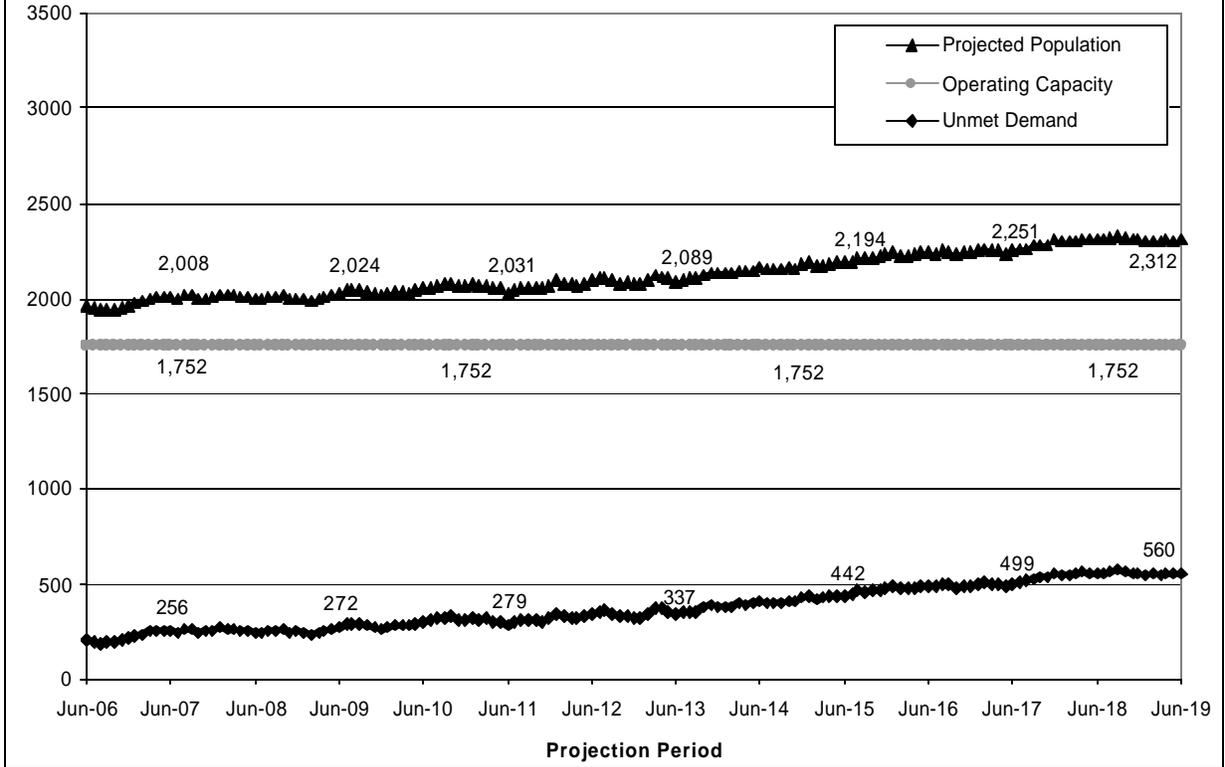
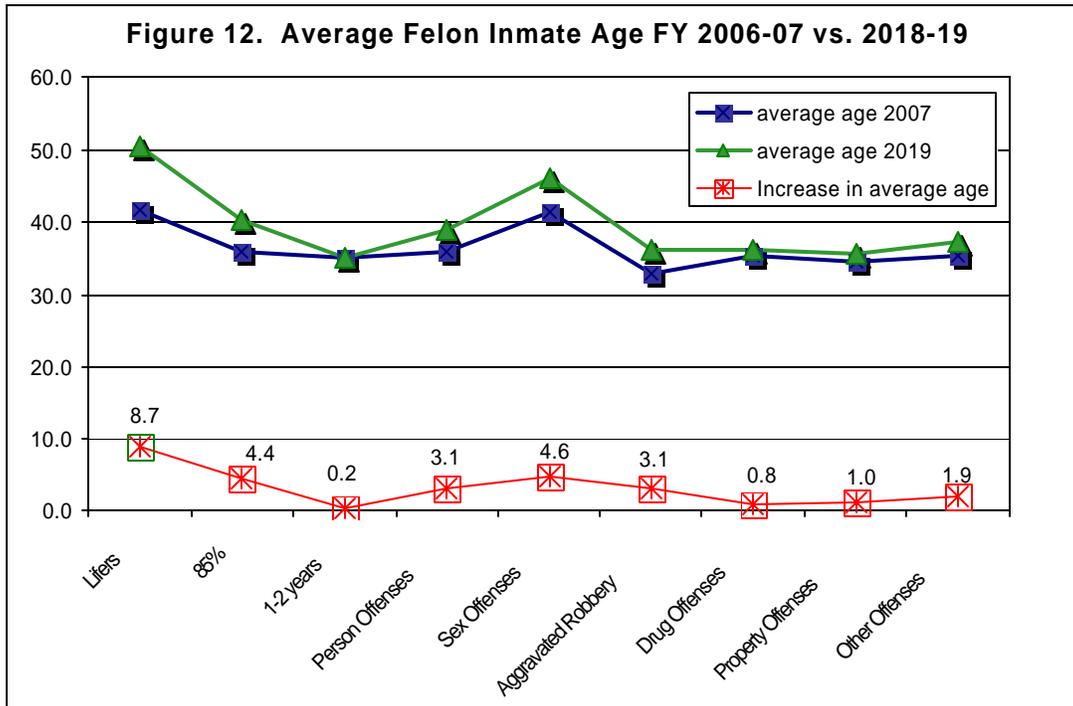


Table 9. Unmet Demand and Projected Incarcerated Felon Population, Total – Male & Female, 2007-2019

Date	Funded Projects	# MALE beds added*	# FEMALE beds added*	TOTAL beds added*	Male Projections	Female Projections	Total Projections	Male OpCap**	Female OpCap**	Total OpCap**	Unmet Male	Unmet Female	Unmet Total
Jun-07	Double Ceiling-TCIP	129		129	24,407	2,008	26,415	23,197	1,752	24,949	1,210	256	1,466
Jun-08					24,796	1,997	26,793	23,197	1,752	24,949	1,599	245	1,844
Jun-09	Morgan Expansion;Annex Beds at WTSP &TCIP	1,120		1,120	25,150	2,024	27,174	24,317	1,752	26,069	833	272	1,105
Jun-10					25,395	2,054	27,449	24,317	1,752	26,069	1,078	302	1,380
Jun-11					25,349	2,031	27,380	24,317	1,752	26,069	1,032	279	1,311
Jun-12					25,617	2,093	27,710	24,317	1,752	26,069	1,300	341	1,641
Jun-13					25,984	2,089	28,073	24,317	1,752	26,069	1,667	337	2,004
Jun-14					26,241	2,162	28,403	24,317	1,752	26,069	1,924	410	2,334
Jun-15					26,427	2,194	28,621	24,317	1,752	26,069	2,110	442	2,552
Jun-16					26,774	2,240	29,014	24,317	1,752	26,069	2,457	488	2,945
Jun-17					27,029	2,251	29,280	24,317	1,752	26,069	2,712	499	3,211
Jun-18					27,260	2,306	29,566	24,317	1,752	26,069	2,943	554	3,497
Jun-19					27,402	2,312	29,714	24,317	1,752	26,069	3,085	560	3,645
TOTAL		1,249	0	1,249									

AGE PROJECTIONS

Due to the general character of the criminal lifestyle and the behaviors associated with such a high-risk life-course, the life spans of felon inmates are significantly lower than the general population. As a result of the truncated life of felon inmates, inmates aged fifty (50) years and over are considered to be elderly by TDOC.



The two offense groups with the largest average forecasted age increases over the next thirteen (13) years are lifers with a projected increase of 8.7 years and sex offenses with a projected increase of 4.6 years (see Figure 12). In 2007 through 2019, lifers appear to have the highest average age (41.7 in 2007 and 50.4 in 2019). Turning to gender differences, female inmates show a higher average age increase over the projected period (from 35.6 year to 37.9 years) than male inmates (from 36.0 years to 38.2 years).

In terms of the actual increase in the number of persons 50 or older, it is anticipated that TDOC will have approximately 908 *additional* elderly offenders by 2019. The majority of these older offenders will be male (837 additional males over 50 years of age and 71 additional females over 50 years of age). Although the inmate population 50 years and over is increasing at a moderate rate (Table 10) any anticipated growth in this population requires appropriate planning due to the resources required to meet their additional needs (additional medical staff, pharmaceuticals, medical equipment and treatment, etc.).

By 2011, the 50+ aged inmate is projected to comprise 13.1% of all incarcerated felons (13.3% males; 9.9% females). The rate of growth is expected to be gradual with 13.9% of the total population achieving 50+ age status in 2019.

Table 10. Number of Forecasted Offenders Aged 50+

	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19
MALE	3,042	3,164	3,230	3,358	3,386	3,465	3,522	3,534	3,640	3,743	3,808	3,841	3,879
FEMALE	174	181	187	184	201	192	199	204	218	228	234	245	245
Total	3,216	3,345	3,417	3,542	3,587	3,657	3,721	3,738	3,858	3,971	4,042	4,086	4,124

¹TDOC expansion plans include the addition of 1249 operational beds (Double celling at Turney Center, Morgan County Correctional Facility expansion to be completed in early 2009, and annex expansions at West Tennessee State Penitentiary and Turney Center.).

² The Mid-Year assessments are dependent upon an average margin of error of the projections of $\pm 2\%$ from the actual population figures. If the average deviation over the period is greater than $\pm 2\%$, the projection assumptions are reviewed and the models are recast.

³ The National Council on Crime and Delinquency (NCCD) prepared inmate population forecasts for the Tennessee Department of Correction (TDOC) from 1986 through 2000. Between the spring of 2000 and 2004, the Institute on Crime, Justice and Corrections (ICJC) at George Washington University held the contract to conduct the forecasts. In 2004 the primary members of the ICJC created JFA Associates and this agency held the accepted bid for TDOC's felon population projection services contract.

⁴ The Wizard 2000 Simulation model is a stochastic entity simulation model. The model simulates the movement of individual cases entering and exiting the Tennessee prison system. The Monte Carlo statistical technique is used to incorporate randomness into the projection model in the form of offender group composition and lengths of stay. The individual cases are simulated through the system based on probability matrices developed by the consultant(s) and TDOC's Policy, Planning, and Research Unit. Essentially, the model mimics the flow of offenders through the Tennessee Criminal Justice System (JFA Associates, Technical Proposal for Population Projection Services, 2004).

⁵ The Assumptions Committee is made up of representatives from the Office of Criminal Justice Programs, Board of Probation and Parole, Governor's Office, Office of the Attorney General, Tennessee Bureau of Statistics, Administrative Office of the Courts, and relevant TDOC leadership.

⁶ Systemwide refers to felons incarcerated in TDOC facilities, those sentenced to TDOC facilities and temporarily housed in local facilities, and those sentenced to and incarcerated in local facilities.

⁷ New admissions (or new court commitments) are felons sentenced to incarceration based on a new conviction. New admissions may include felons who have expired their sentence or supervision conditions (i.e., they are not under community supervision, e.g., parole).

⁸ Violators returned are felons who have been under community supervision but have been re-incarcerated because of new offenses or technical violations of the terms of their supervision.

⁹ TDOC Operating Capacity is based on the number of total beds available and the designated use of certain beds. The operating capacity indicates the population that should be assigned to the institution on a regular basis. The underlying logic is to exclude from capacity beds for special purposes, e.g., medical or mental health reasons, disciplinary segregation, or protective custody. The Department's operating capacity is currently set at 98% of total beds available.

¹⁰ The TBI and the FBI have worked together to categorize Tennessee's legal code according to the NIBRS system of offense classification. Further detail can be obtained through either the TDOC or TBI web-sites.