Office of the
Secretary of Public Safety

REPORT ON THE OFFENDER POPULATION FORECASTS (FY2008 TO FY2013)

To The Governor and General Assembly

Commonwealth of Virginia

Richmond, October 15, 2007

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Authority

This report has been prepared and submitted to fulfill the requirements of Item 377(A) of Chapter 847 of the 2007 Acts of Assembly. This provision requires the Secretary of Public Safety to present revised offender population forecasts to the Governor, the Chairmen of the House Appropriations and Senate Finance Committees, and the Chairmen of the House and Senate Courts of Justice Committees by October 15, 2007. Specifically, the Secretary must present updated forecasts for the adult state-responsible, adult local-responsible, juvenile state-responsible and juvenile local-responsible offender populations. In addition, the Secretary must ensure that the adult state-responsible offender forecast includes an estimate of the number of probation violators included in the overall population forecast who may be appropriate for punishment via alternative sanctions. This document contains the Secretary's report for 2007.

Executive Summary

Forecasts of offenders confined in state and local correctional facilities are essential for criminal justice budgeting and planning in Virginia. The forecasts are used to estimate operating expenses and future capital needs and to assess the impact of current and proposed criminal justice policies. The Secretary of Public Safety oversees the forecasting process and, as required by the Appropriation Act, presents updated forecasts annually to the Governor, the Chairmen of the House Appropriations and Senate Finance Committees, and the Chairmen of the House and Senate Courts of Justice Committees.

To produce the prisoner forecasts, the Secretary of Public Safety utilizes an approach known as "consensus forecasting." This process brings together policy makers, administrators and technical experts from all branches of state government. The process is structured through committees. The Technical Advisory Committee is composed of experts in statistical and quantitative methods from several agencies. While individual members of this Committee generate the various prisoner forecasts, the Committee as a whole carefully scrutinizes each forecast according to the highest statistical standards. Select forecasts are presented to the Policy-Technical Liaison Work Group. Chaired by the Deputy Secretary of Public Safety, the Work Group evaluates the forecasts and provides guidance and oversight for the Technical Advisory Committee. It includes deputy directors and senior managers of criminal justice and budget agencies, as well as staff of the House Appropriations and Senate Finance Committees. Forecasts accepted by the Work Group then are presented to the Policy Advisory Committee. Led by the Secretary of Public Safety, the Policy Advisory Committee reviews the various forecasts, making any adjustments deemed necessary to account for emerging trends or recent policy changes and selects the official forecast for each prisoner population. This Committee is made up of agency directors, lawmakers and other top-level officials from Virginia's executive, legislative and judicial branches, as well as representatives of Virginia's law enforcement and prosecutorial associations. Through the consensus process, a separate forecast is produced for each of the four major correctional populations, discussed below.

Adult State-Responsible Offender Population. The adult state-responsible offender population, the largest of the four forecasts, includes inmates incarcerated in state prisons as well as state inmates housed in local and regional jails around the Commonwealth. The population grew by 3.9% in FY2007, reaching 38,007 inmates. This growth, the highest single-year increase since FY2002, is primarily due to the significant increase in the number of offenders committed to the Department of Corrections (DOC). New commitments grew by more than 12% in 2006, far exceeding the growth experienced in previous years (5.1% in 2005, 0.1% in 2004, and 3.2% in 2003). Longer lengths of stay in FY2006, larger numbers of technical probation violators entering DOC and lower parole grant rates for inmates sentenced prior to the abolition of parole also contributed to the larger inmate population. Given recent trends, the 2007 forecast is higher than the one approved a year ago. The population is expected to reach 44,744 inmates by the end of FY2013, with an average annual growth of 2.8% anticipated over the next six years (see table below). As required, the forecast has been disaggregated to identify the number

of probation violators within the overall population who may be appropriate for alternative sanctions. By the end of FY2013, it is projected that the state-responsible population will include 2,994 technical probation violators. Based on a recent study, DOC estimates that 53% of technical violators sentenced to the Department may be suitable for alternative programs.

Adult Local-Responsible Offender Population. The adult local-responsible offender population is defined as the number of persons confined in local and regional jails across the Commonwealth, excluding state and federal inmates and ordinance violators. In FY2007, the average local-responsible offender population grew by 7.6%, to 20,703 prisoners. Several recent trends have likely had an impact on the jail population, such as increases in the number of adults arrested in Virginia, longer case processing time in the courts (resulting in longer periods of time served awaiting trial), and longer lengths of stay by convicted offenders serving a sentence. Strong growth for a second consecutive year has resulted in a higher forecast. The local-responsible offender population is projected to expand by 4.8% annually and reach an average of 27,394 offenders in FY2013 (see table below).

Juvenile State-Responsible Offender Population. The juvenile state-responsible offender population refers to the number of juveniles held in the Department of Juvenile Justice (DJJ) correctional facilities. This population has declined each year since 2000. Some of this decline is attributed to a change in the minimum criteria for a juvenile to be committed to DJJ (from a felony or two Class 1 misdemeanor adjudications to a felony or four Class 1 misdemeanor adjudications) beginning July 1, 2000; however, the Department cannot attribute the continued decline in commitments through FY2007 to that policy change. The average daily population for the month of June 2007 was 1,013 juveniles. The forecast calls for a modest decline through FY2010. Beginning in FY2011, the population of juveniles in state correctional facilities is expected to begin increasing again due to the longer lengths of stay, on average, for juveniles committed today compared to juveniles committed a few years ago. By June 2013, the average daily population is expected to reach 943 juveniles (see table below).

Juvenile Local-Responsible Offender Population. The juvenile local-responsible offender population encompasses all juveniles held in locally-operated detention homes around the Commonwealth. The state provides partial funding for detention home construction and DJJ is responsible for licensure of these facilities. The overall detention home population has declined since FY2000 to an average of 1,061 juveniles in FY2007. While individual facilities may be experiencing crowding, detention home capacity statewide has not been fully utilized in recent years. A decline in this population is anticipated through FY2013, when the number of juveniles in detention homes is projected to average 1,003 (see table below).

2007 Offender Forecasts

Fiscal Year	Adult State-Responsible Offender Population (June 30)	Technical Probation Violators within the Adult State-Responsible Offender Population (June 30)*	Adult Local-Responsible Offender Population (FY Average)	Juvenile State-Responsible Offender Population (June Average)	Juvenile Local-Responsible Offender Population (FY Average)
FY2007 (actual)	38,007	2,419 (estimated)	20,703	1,013	1,061
FY2008	39,347	2,505	21,568	979	1,048
FY2009	40,305	2,592	22,624	957	1,026
FY2010	41,292	2,693	23,769	928	1,018
FY2011	42,399	2,792	24,983	937	1,013
FY2012	43,559	2,893	26,188	940	1,008
FY2013	44,744	2,994	27,394	943	1,003
Average annual change	2.8%	4.0%	4.8%	-1.2%	-0.9%

* The Technical Probation Violator forecast is a subgroup of, and not in addition to, the Adult State-Responsible Population Forecast. The Department of Corrections estimates that 53% of technical probation violators who are sentenced to the Department may be suitable for alternative programs.

Virginia's Offender Forecasting Process

Each year, the Secretary of Public Safety oversees the offender forecasting process. These forecasts are essential for criminal justice budgeting and planning in the Commonwealth. They are used to estimate operating expenses and future capital needs for state prisons, local and regional jails and juvenile correctional facilities. In addition, the forecasts provide critical information for assessing the impact of current and proposed criminal justice policies. To produce the prisoner forecasts, the Secretary of Public Safety utilizes an approach known as "consensus forecasting." First implemented in Virginia in the late 1980s, consensus forecasting is an open, participative approach that brings together policy makers, administrators and technical experts from many state agencies across all branches of state government. The objective is to ensure that key policymakers and administrators in the criminal justice system have input into the forecast. Moreover, the process is intended to promote general understanding of the forecast and the assumptions that drive it.

The process is structured through committees. The Technical Advisory Committee is composed of experts in statistical and quantitative methods from several agencies. Analysts from particular agencies are tasked with developing prisoner forecasts. At least two forecast models are developed for each of the four major correctional populations. Confidence in the forecast can be bolstered if the different methods used by multiple agencies converge on the same future population levels. While individual members generate the various prisoner forecasts, the Committee as a whole carefully scrutinizes each forecast according to the highest statistical standards. The forecasts with the best set of statistical properties are recommended by the Technical Advisory Committee for consideration by the Policy-Technical Liaison Work Group. Chaired by the Deputy Secretary of Public Safety, Work Group members include deputy directors and senior managers of criminal justice and budget agencies as well as staff of the House Appropriations and Senate Finance Committees. Meeting throughout the development of the forecasts, the Work Group provides guidance and oversight for the Technical Advisory Committee, discusses detailed aspects of the projections, and directs technical staff to provide additional data needed for decision-making. The diverse backgrounds and expertise of Work Group members promote in-depth discussions of numerous issues and trends in criminal justice in Virginia. After thorough evaluation of each forecast, the Work Group makes recommendations to the Policy Advisory Committee. Led by the Secretary of Public Safety, the Policy Advisory Committee reviews the various forecasts and selects the official forecast for each prisoner population. This Committee also considers the effects of emerging trends or recent policy changes, adjusting the forecasts, as it deems appropriate. The Policy Advisory Committee is made up of agency directors, members of the General Assembly, and other top-level officials from Virginia's executive, legislative, and judicial branches. Each year, a prosecutor, sheriff and police chief are invited to serve on the Committee to represent their respective associations.

Through the consensus process, a separate forecast is produced for each of the four major correctional populations. The forecasting process benefits from rigorous quantitative analysis by the Technical Advisory Committee, detailed scrutiny by the Policy-Technical Liaison Work Group, and high-level review by the Policy Advisory Committee.

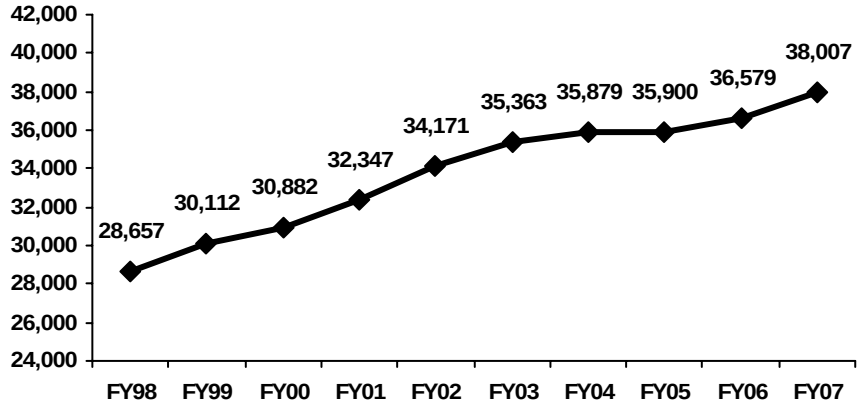
Adult State-Responsible Offender Population

The adult state-responsible offender population includes inmates incarcerated in state prison facilities as well as those state inmates being housed in the local and regional jails around the Commonwealth. It is the largest of the four major correctional populations. For forecasting purposes, state-responsibility begins on the day an offender is sentenced to prison or, if there are multiple cases, the day the offender is sentenced in the final case.

Population Growth

At the end of FY2007, the adult state-responsible prisoner population had reached 38,007 inmates (Figure 1). Local and regional jails held 6,356 of the state inmates on that date. The inmate population as a whole grew by 1,428 offenders, or 3.9%, during FY2007. This rate of growth is higher than the growth recorded in any of the previous four fiscal years and twice the rate of growth experienced in FY2006 (the population grew by 1.9% in FY2006, 0.1% in FY2005, 1.5% in FY2004, and 3.5% in FY2003, respectively).

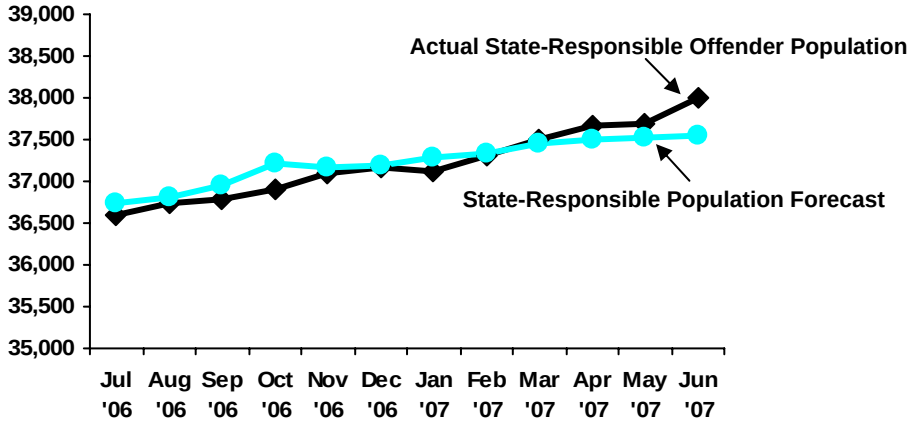
Figure 1
Adult State-Responsible Offender Population (as of June 30)



Accuracy of the 2006 Forecast

The forecast of the state-responsible inmate population adopted in 2006 proved to be highly accurate for most of FY2007 (Figure 2). In fact, the forecast was 99.96% accurate on average for the fiscal year. The average monthly error was just 13 inmates. The forecast projected an inmate population of 37,547 for the end of FY2007. With a sharp increase during the final month of the fiscal year, the state-responsible population on June 30 was 38,007 inmates. This exceeded the June 2007 forecast by 460 prisoners.

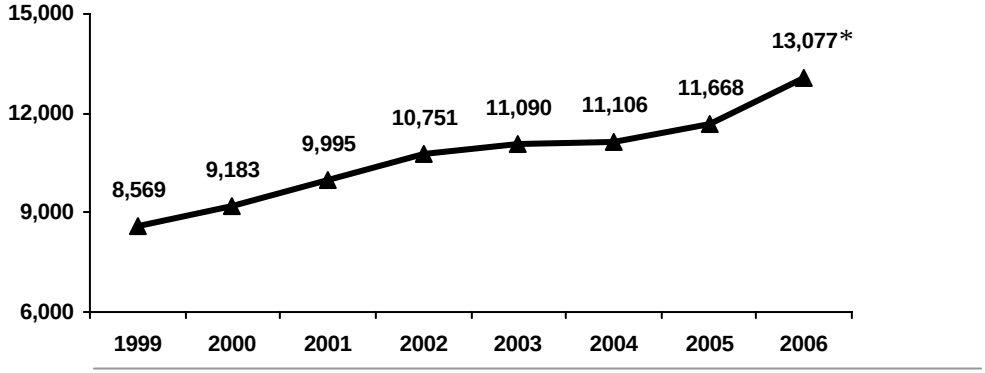
Figure 2
Accuracy of the 2006 Adult State-Responsible Offender Forecast



Factors Affecting the Adult State-Responsible Offender Population

The number of offenders entering the state-responsible inmate population each year is a critical factor affecting population growth. In calendar year (CY) 2006, the courts committed more than 13,000 offenders to Virginia's Department of Corrections (DOC). This is an increase of more than 12% over the number of CY2005 commitments (Figure 3). The growth in new commitments in CY2006 far surpassed the growth recorded in recent years (5% in 2005, 0.1% in 2004, and 3.2% in 2003).

Figure 3
New Court Commitments (by Calendar Year)



* The number of new commitments in CY2006 is not finalized and is subject to change.

Data reveal increases in offenders and caseloads throughout Virginia's criminal justice system. Although crime rates (crimes per 100,000 population) continue to decline in Virginia for most offenses, the actual number of adults arrested has been climbing. Adult arrests for violent index (murder, rape, robbery and aggravated assault), property index (burglary, larceny and motor vehicle theft), and drug crimes increased by 4.6% between CY2004 and CY2006. Overall, from CY2000 to CY2006, the number of adults arrested for these crimes climbed more than 26%. Court caseloads also have risen. For example, the number of felony defendants processed through Virginia's circuit courts jumped 9.5% in CY2006 alone.

Data suggest that other factors have had an impact on the state-responsible population, albeit to a lesser extent. Longer lengths of stay by inmates in FY2006, larger numbers of technical probation violators entering DOC, and lower parole grant rates for inmates sentenced prior to the abolition of parole also contributed to the larger inmate population.

Impact of Truth-in-Sentencing/No Parole

In 1994, the General Assembly passed legislation to abolish discretionary parole release and to implement a system known as "truth-in-sentencing" in Virginia. Felony offenders must now serve at least 85% of their prison or jail terms. New sentencing guidelines were implemented in 1995. Under these guidelines, recommendations for nonviolent offenders with no prior record of violence are tied to the amount of time those offenders historically served under the old parole system. For offenders with current or prior convictions of violent crimes, built-in guidelines trigger recommendations that are up to six times longer than time served in prison under parole. The longer sentence recommendations apply in one in five felony cases. As a result of truth-in-sentencing provisions, growth in the inmate population is more predictable, largely insulated from the impact of swings in parole grant rates. Although parole was abolished for offenders committing new felonies on or after January 1, 1995, inmates in prison on that date remained eligible for parole release. Overall, the length-of-stay in prison is longer today than prior to enactment of truth-in-sentencing. Many offenders have received lengthy sentences under the no-parole policy and remain incarcerated. These offenders are not yet included in the time-served data for released offenders.

Simulation Forecasting and Forecast Assumptions

As with the other correctional populations, two forecast models are developed for the state-responsible population by two analysts working independently of one another. The Department of Planning and Budget produces one of the state-responsible forecast models and the Department of Corrections generates the other. To develop its forecast, DOC utilizes computer simulation software. This software, used by DOC since 1986, is designed to mimic the flow of offenders through the system, simulating how offenders enter and leave the system. To accurately simulate the movement of offenders through the system, actual data describing the offenders admitted to prison and the factors affecting their lengths-of-stay are compiled and programmed into the simulation model. Use of simulation forecasting requires several assumptions to be made regarding commitments and releases. Following are the important assumptions approved by the Policy Advisory Committee and incorporated into DOC's simulation model:

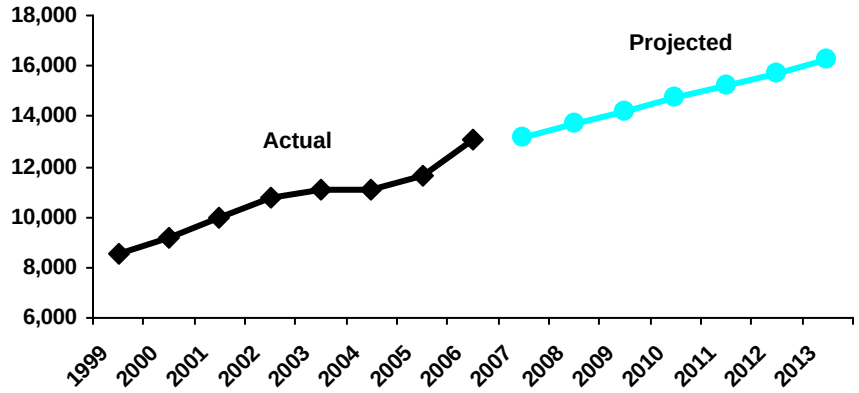
- The number of future commitments to DOC will reflect the forecast approved by the Policy Advisory Committee (see below).
- The portion of commitments who are technical probation violators will reflect the forecast approved by Policy Advisory Committee.
- Future admissions will have the same characteristics as CY2006 admissions in terms of offenses, sentences lengths, jail credits, good-time earning potential, etc.

- Inmates will continue to earn sentence credits at the same rates as in CY2006.
- For inmates serving out their sentences under the parole system, the average parole grant rate will be 5.0%, the actual grant rate for FY2006.

New Court Commitment Forecast

The new commitment forecast is the most significant factor driving DOC's simulation model projections. The new commitment forecast is the six separate commitment forecasts based on offense type and gender (nonviolent-male, violent-male, drug-male, nonviolent-female, violent-female, and drug-female). Generating commitment forecasts by offense type and gender accounts for differences in short and long-term trends across categories. The total number of new commitments jumped by more than 12% in CY2006; however, this rate of growth is not expected to continue into the forecast horizon. After CY2007, the forecast for new commitments projects an annual growth between 3.3% and 3.9% (Figure 4). It is expected that female new commitments will continue to grow faster (3.9% on average per year) than male new commitments (3.0% on average per year) through FY2013. Two competing forecast models were developed for each of the six new commitment categories. It should be noted that the two forecasts developed for violent-male new commitments diverged somewhat, particularly in the latter years of the forecast horizon. After considerable deliberation by the Policy-Technical Liaison Work Group and the Policy Advisory Committee, the higher violent-male commitment projections were adopted; however, the Policy Advisory Committee directed technical staff to monitor closely the performance of both projections during the coming year.

Figure 4
Adult State-Responsible New Commitment Forecast (by Calendar Year)



Actual:

Year	Commitments	Change
1999	8,569	-1.0%
2000	9,183	7.2%
2001	9,995	8.8%
2002	10,751	7.6%
2003	11,090	3.2%
2004	11,106	0.1%
2005	11,668	5.1%
2006	13,077*	12.1%
	Avg. growth	5.4%

Forecast:

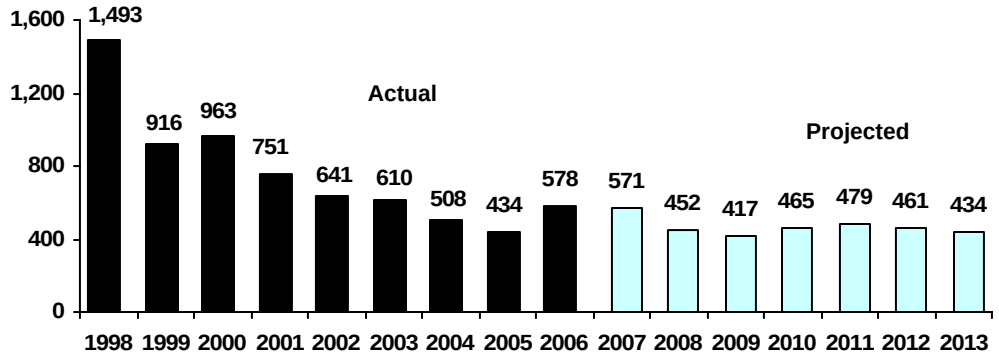
Year	Commitments	Change
2007	13,160	0.6%
2008	13,674	3.9%
2009	14,188	3.8%
2010	14,703	3.6%
2011	15,217	3.5%
2012	15,730	3.4%
2013	16,247	3.3%
	Avg. growth	3.2%

* The number of new commitments in CY2006 is not finalized and is subject to change.

Parole and Post-Release Supervision Violators

Although parole was abolished for offenders committing felonies on or after January 1, 1995, inmates who had been sentenced under the parole system remained eligible for discretionary parole release. Offenders on parole who violate the conditions of supervision can be returned to DOC by the Virginia Parole Board. Truth-in-sentencing provisions have resulted in a gradual decline in the number of parole violators returning to prison. In 2000, the General Assembly modified § 19.2-295.2 to require a judge who does not suspend at least six months of an offender's sentence to impose a term of post-release supervision lasting six months to three years which, unless otherwise specified, is administered by the Parole Board. Failure on post-release supervision can result in return to DOC in the same manner as revocation of parole. Since 2006, the forecast of parole violators returned to prison has included estimates of post-release supervision violators expected to return. The approved parole/post-release violator forecast is shown in Figure 5.

Figure 5
Parole and Post-Release Supervision Violators Returned to the Department of Corrections



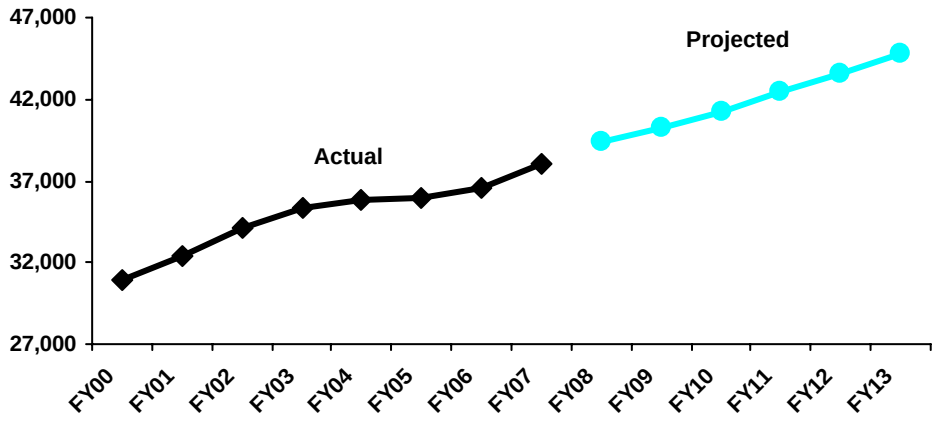
Note: Figures for 1998-2005 do not include post-release supervision violators.

2007 Adult State-Responsible Offender Forecast

As noted above, two analysts working independently each developed a forecast model for the state-responsible population. DOC utilized the forecast of new court commitments and parole/post-release supervision violators shown above to program its simulation model and generate a forecast of the overall state-responsible population. The Department of Planning and Budget developed a statistical model to project the number of state-responsible inmates using techniques known as time-series forecasting. The two methods, however, yielded considerably different results. By FY2013, the final year of the forecast, the difference between the two projections is approximately 2,200 inmates. The Policy-Technical Liaison Work Group and the Policy Advisory Committee discussed these models in great detail. The Policy Advisory Committee, after careful consideration, elected to average the two projections. There is some empirical evidence suggesting that accuracy can be improved by averaging forecasts developed using different methods. The result was adopted as the official state-responsible inmate forecast

for FY2008 through FY2013. The number of state-responsible inmates is expected to reach 44,744 by the end of FY2013 (Figure 6). This forecast projects an average annual growth of 2.8% over the next six years.

Figure 6
2007 Adult State-Responsible Offender Forecast (as of June 30)



Actual:

Year	Population	Change
FY00	30,882	2.6%
FY01	32,347	4.7%
FY02	34,171	5.6%
FY03	35,363	3.5%
FY04	35,879	1.5%
FY05	35,900	0.1%
FY06	36,579	1.9%
FY07	38,007	3.9%
	Avg. growth	3.0%

Forecast:

Year	Population	Change
FY08	39,347	3.5%
FY09	40,305	2.4%
FY10	41,292	2.4%
FY11	42,399	2.7%
FY12	43,559	2.7%
FY13	44,744	2.7%
	Avg. growth	2.8%

Fiscal Year	2006 Forecast	Approved 2007 Forecast	Difference
2007	37,547	38,007 (Actual)	460
2008	38,143	39,347	1,204
2009	38,883	40,305	1,422
2010	39,908	41,292	1,384
2011	40,991	42,399	1,408
2012	42,201	43,559	1,358
2013	N/A	44,744	

Figures represent the population as of June 30 for each year reported.

To assist DOC in facility planning, the state-responsible inmate forecast is disaggregated by gender. Higher growth rates for the female inmate population over the male population are expected to persist (Figure 7). Over the next six years, the male inmate population is projected to increase by an average of 2.6% annually. The female inmate population is projected to grow at nearly twice that rate, with 4.8% growth anticipated on average each year.

Figure 7
2007 Adult State-Responsible Offender Forecast by Gender (as of June 30)

Fiscal Year	Males	Percent Change
FY08	36,092	3.1%
FY09	36,845	2.1%
FY10	37,705	2.3%
FY11	38,683	2.6%
FY12	39,720	2.7%
FY13	40,800	2.7%

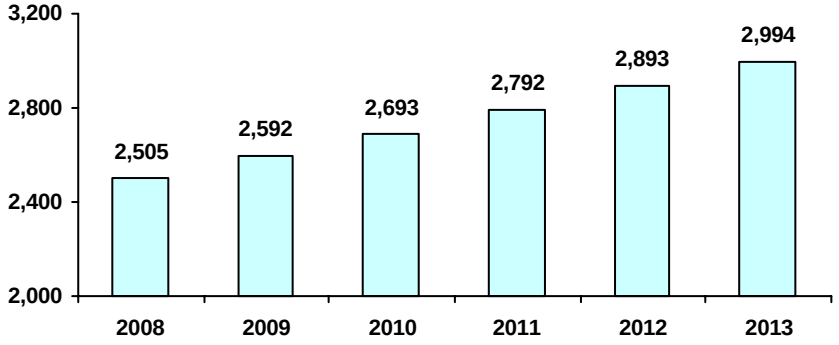
Projected average growth FY2007 – FY2012: 2.6%

Fiscal Year	Females	Percent Change
FY08	3,255	9.1%
FY09	3,460	6.3%
FY10	3,587	3.7%
FY11	3,716	3.6%
FY12	3,839	3.3%
FY13	3,944	2.7%

Projected average growth FY2007 – FY2012: 4.8%

Item 377(A) of Chapter 847 of the 2007 Acts of Assembly requires the Secretary of Public Safety to provide an estimate of the number of probation violators within the state-responsible population who may be appropriate for punishment via alternative sanctions. DOC refined its simulation model in 2005 in order to disaggregate the forecast in this manner. By the end of FY2013, it is projected that the state-responsible population will include 2,994 technical probation violators (Figure 8). Based on a recent study, DOC estimates that 53% of technical violators sentenced to DOC may be suitable for alternative programs.

Figure 8
Technical Probation Violator Population Forecast *



*** Based on a recent study, the Department of Corrections (DOC) estimates that 53% of technical violators received by DOC may be suitable for alternative programs. DOC determined that approximately 47% of technical violators admitted are likely not good candidates for alternatives due to convictions for violent offenses (22%), mental health issues (15%) or medical conditions (10%).**

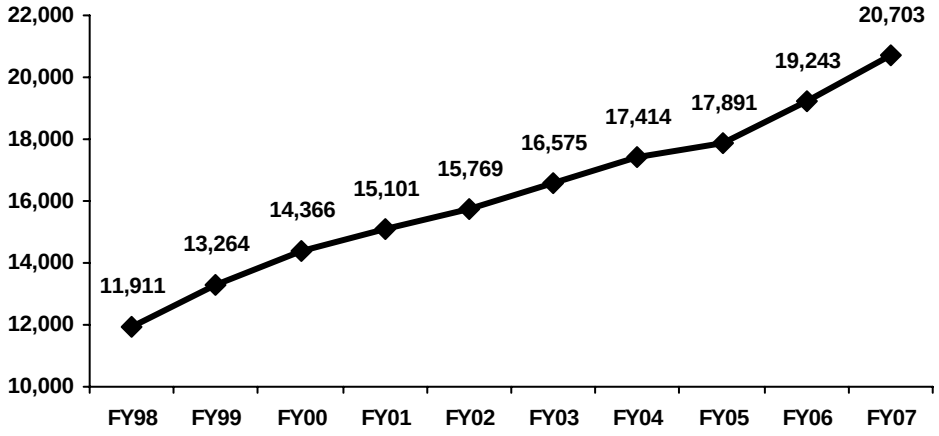
Adult Local-Responsible Offender Population

The adult local-responsible prisoner population is defined as the number of persons confined in local and regional jails across the Commonwealth, excluding state and federal inmates and ordinance violators. During FY2007, local-responsible prisoners on average accounted for approximately 72% of the total jail population. State-responsible offenders and federal prisoners averaged 21% and 6% of the total jail population, respectively. Less than 2% of all offenders in jail were identified as ordinance violators. Jail data is derived from the Compensation Board's Local Inmate Data System (LIDS), which contains information on all persons entering and exiting local and regional jails throughout Virginia.

Population Growth

The local-responsible population fluctuates seasonally. The population peaks during the spring and summer months. Jails record the lowest population levels during the winter months, particularly December and January. Due to this significant seasonal variation, the average local-responsible population for the fiscal year is most often used for forecasting purposes. In FY2007, the average local-responsible population was 20,703 prisoners, an increase of 1,460 (or 7.6%) over the comparable figure for FY2006 (Figure 9). This is the second consecutive year of growth in excess of 7%. The local-responsible population had been growing at a slower pace during the five previous fiscal years (with increases ranging from 2.7% to 5.1% per year).

Figure 9
Adult Local-Responsible Offender Population (FY Average)

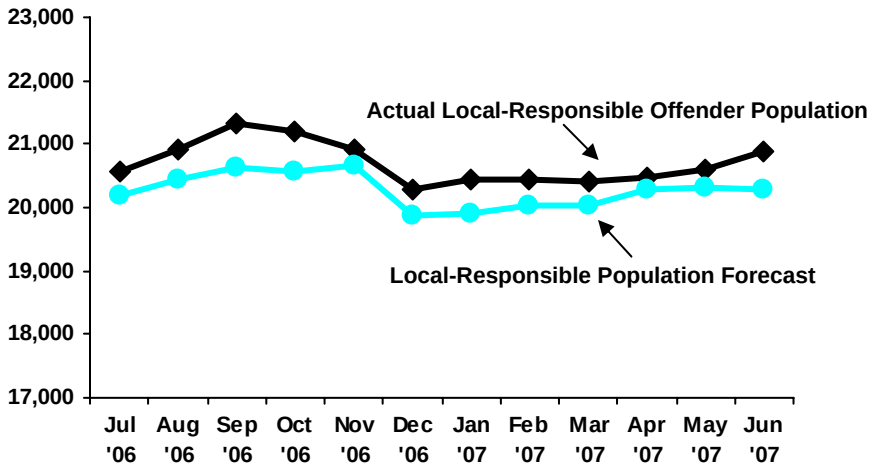


Accuracy of the 2006 Forecast

Although the actual local-responsible population exceeded the forecast throughout the fiscal year, the margin of error was not large (Figure 10). The average monthly error during

FY2007 was 435 prisoners. The forecast adopted last year was 97.9% accurate. The average prisoner population was projected to be 20,268 for FY2007; however, the local-responsible population averaged 20,703 for the fiscal year.

Figure 10
Accuracy of the 2006 Local-Responsible Offender Forecast



Factors Affecting the Adult Local-Responsible Offender Population

Several recent trends have had an impact on the jail population, such as increases in the number of adults arrested in Virginia, longer case processing time in the courts resulting in longer periods of time served awaiting trial and longer lengths of stay by convicted offenders serving a sentence. Many of the same factors that influence the state-responsible inmate population also affect the local-responsible population in jail. As noted above, the number of adults arrested in Virginia has been climbing, despite reductions in the crime rate (crimes per 100,000 population) in recent years. Adult arrests for violent index (murder, rape, robbery and aggravated assault), property index (burglary, larceny, and motor vehicle theft), and drug crimes increased by 4.6% between CY2004 and CY2006, and by 26% overall from CY2000 to CY2006. Virginia's courts have been experiencing higher caseloads. For example, the number of misdemeanor cases concluded in general district court increased by 2.7% in CY2006, while the number of felony cases concluded in circuit court increased by 9.1% that year.

Trends in arrests and court caseloads have a direct impact on the number of persons entering local and regional jails in Virginia. The total number of persons booked into jails statewide rose 3.9% in FY2007, topping more than 320,000. Moreover, the average length-of-stay in jail while awaiting trial and sentencing (for those who remain confined awaiting trial) has increased an estimated 22% since FY2000, climbing from 19.4 days to 23.7 days. An increase of this magnitude, while seemingly small, has a significant effect given the number of commitments to jail each year. Case processing time also affects the population awaiting trial. According to

the Supreme Court of Virginia, the percent of cases concluded within the timeframes specified in the time processing guidelines has been declining since 2003.

Regulation of bail bondsmen and bail enforcement agents may have had an impact on the prisoners awaiting trial. The 2003 General Assembly adopted legislation to prohibit felons from acting as property bail bondsmen and to require the State Corporation Commission to begin licensing surety bail bondsmen (effective October 1, 2003). The 2004 General Assembly gave the Department of Criminal Justice Services (DCJS) full regulatory authority of property and surety bail bondsmen (effective July 1, 2005). The 2004 legislation added further restrictions on who may become a licensed bail bondsman and established a criminal penalty for bonding without a license. Additionally, the 2004 General Assembly passed legislation requiring DCJS to regulate bail enforcement agents (bounty hunters) and to prohibit certain persons from acting as bail enforcement agents (effective October 1, 2005). These regulations may have been a factor in the growth in the number of persons in jail awaiting trial, particularly in FY2006. Because data on bail bondsmen and bounty hunters is not available for the period prior to regulation, the impact of these policy changes is difficult to quantify.

In contrast to other trends, the backlog of cases to be analyzed by the Department of Forensic Science (which may affect the awaiting trial population) dropped by two-thirds in FY2007.

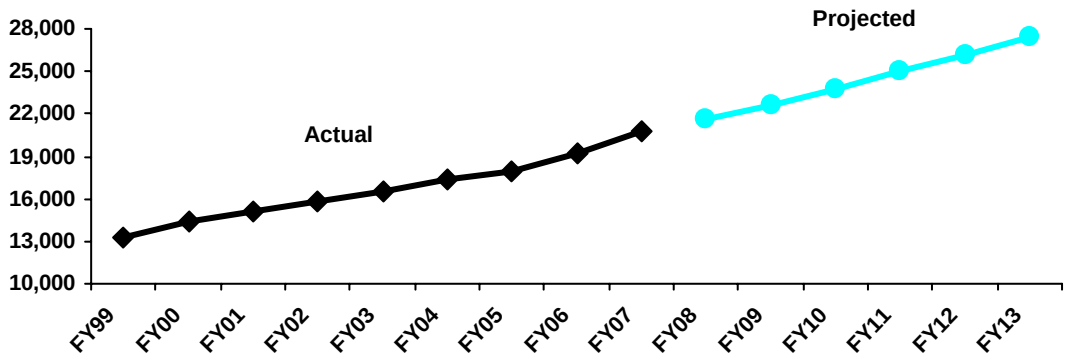
Forecasting Methodology

Local-responsible population projections are developed using techniques that, collectively, are known as time-series forecasting. Time-series methodology has been used in Virginia to forecast local jail populations since 1991. Time-series forecasting assumes there is a pattern in the historical values that can be identified. The goal is to define the pattern, understand the short-term and long-term trends and pinpoint any seasonal fluctuations. Time-series forecasting then utilizes the pattern, trend and seasonal variation identified in the historical data to project future values.

2007 Adult Local-Responsible Offender Forecast

The adult local-responsible offender population is expected to reach an average of 27,394 in FY2013 (Figure 11). The forecast projects an average annual growth of 4.8% per year. Strong growth in this population for a second consecutive year has resulted in a forecast that is higher than that adopted last year. By FY2012, the 2007 forecast is higher than the previous year's forecast by more than 1,300 offenders. In approving this forecast, the Policy Advisory Committee noted the current moratorium on jail construction (with exceptions granted on a case-by-case basis) and the ability of the General Assembly to respond annually to changes in necessary per diem payments to localities for support of jails.

Figure 11
2007 Adult Local-Responsible Offender Forecast (FY Average)



Actual:

Year	Population	Change
FY00	14,366	8.3%
FY01	15,101	5.1%
FY02	15,769	4.4%
FY03	16,575	5.1%
FY04	17,414	5.1%
FY05	17,891	2.7%
FY06	19,243	7.6%
FY07	20,703	7.6%
	Avg. growth	5.7%

Forecast:

Year	Population	Change
FY08	21,568	4.2%
FY09	22,624	4.9%
FY10	23,769	5.1%
FY11	24,983	5.1%
FY12	26,188	4.8%
FY13	27,394	4.6%
	Avg. growth	4.8%

Fiscal Year	2006 Forecast	Approved 2007 Forecast	Difference
2007	20,268	20,703 (Actual)	435
2008	21,002	21,568	566
2009	22,005	22,624	619
2010	23,022	23,769	747
2011	23,970	24,983	1,013
2012	24,846	26,188	1,342
2013	N/A	27,394	

Figures represent the average population for each fiscal year reported.

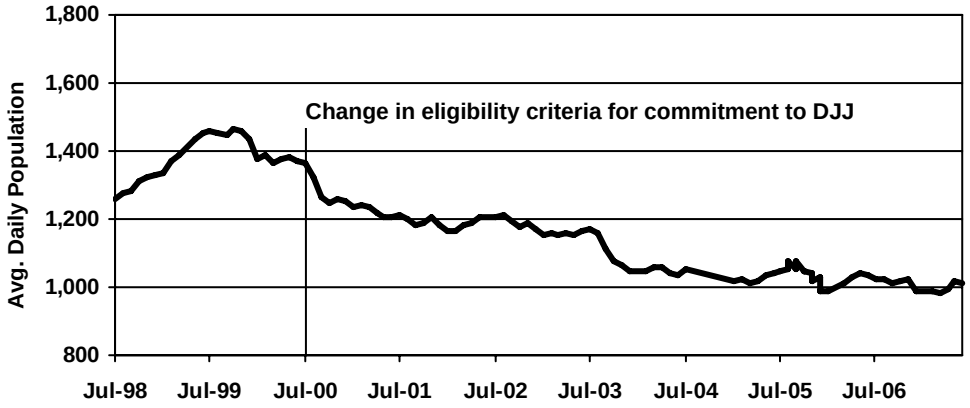
Juvenile State-Responsible Offender Population

The juvenile state-responsible offenders are juveniles who are committed to the Department of Juvenile Justice (DJJ) as wards. These juveniles are housed in the Department's juvenile correctional facilities around the state. Virginia's juvenile justice system differs substantially from the adult system. While Virginia has moved to a more determinate sentencing system for its adult offenders, sentences in the juvenile system remain largely indeterminate. The Juvenile and Domestic Relations District Courts commit only a small percentage of juvenile offenders with a determinate, or fixed length, sentence. Approximately 90% of the juveniles committed to DJJ receive an indeterminate sentence. This means that DJJ, rather than a judge, determines the length of the juvenile's commitment to the state. The projected length of stay is dependent upon the youth's current offenses, prior offenses and length of prior record. The actual length of stay also depends upon the youth's completion of mandatory treatment objectives, such as substance abuse or sex offender treatment, and the youth's behavior within the institution. For the remaining juveniles committed to the Department, the judge sets a determinate sentence, which he or she can review later. Even juveniles committed to DJJ with a determinate sentence can be released at the judge's discretion prior to serving the entire term.

Population Decline

The average daily population (ADP) for juveniles in correctional centers has declined since 2000 (Figure 12). The average daily population for the month of June 2007 was 1,013. Some of the decline in the juvenile correctional center population can be attributed to a change in the minimum criteria for a juvenile to be committed to DJJ. Beginning July 1, 2000, the criteria for commitment changed from a felony or two Class 1 misdemeanor adjudications to a felony or four Class 1 misdemeanor adjudications. This change had an immediate impact on the number of juveniles committed to DJJ and on the population of juveniles in DJJ's correctional centers. Recent declines cannot be directly attributed to that change in legislation.

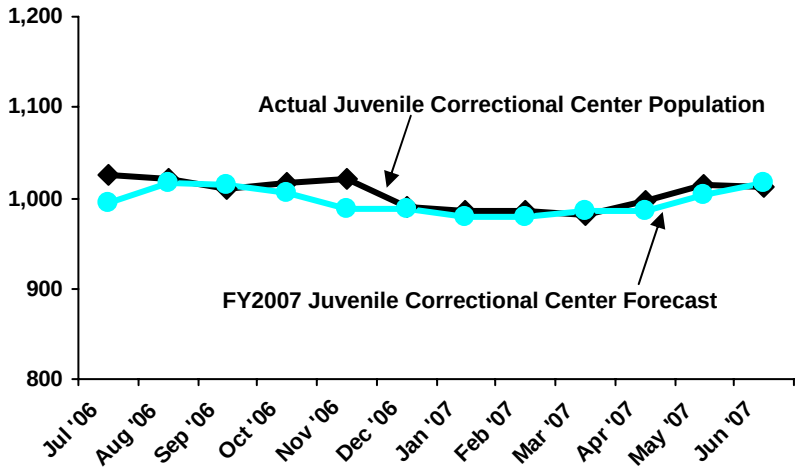
Figure 12
Historical Juvenile State-Responsible Offender Population



Accuracy of the 2006 Forecast

The juvenile state-responsible forecast adopted in 2006 was extremely accurate throughout FY2007 (Figure 13). For June 2007, the average juvenile correctional center population was 1,013, which fell short of the forecast by only three juveniles. The forecast for FY2007 was 99.7% accurate.

Figure 13
Accuracy of the Juvenile State-Responsible (Correctional Center) Population in FY2007

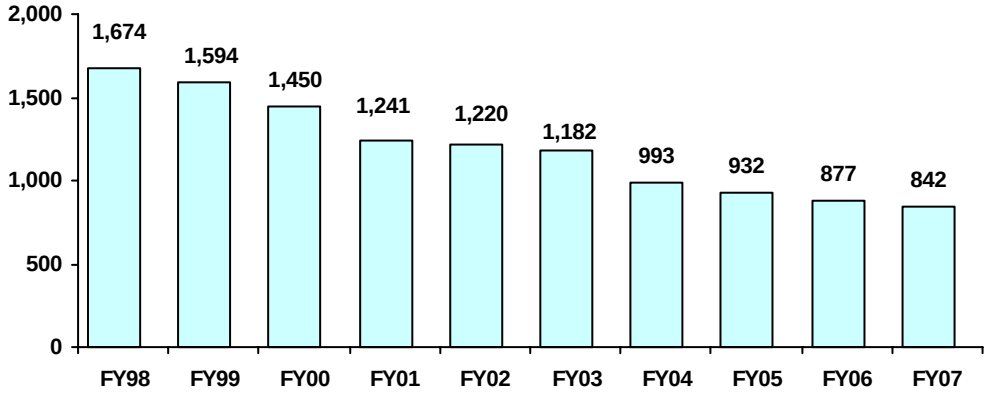


Factors Affecting the Juvenile Correctional Center Population

As noted above, the population of youth in DJJ facilities has been declining for several years. FY2007 was no exception to this overall trend. Over the last decade, admissions to juvenile correctional centers have dropped 50% (Figure 14). According to DJJ, some (but not all) of the decline has resulted from the change in criteria for a juvenile to be committed to the DJJ. Data also reveal that fewer youth have been entering the first stage of the juvenile justice system, known as "intake." An intake occurs when a juvenile is brought before a court service unit officer for one or more alleged law violations. Total annual intakes decreased by 3.1% between FY2003 and FY2007, although intakes for person felonies increased during this time period. In FY2007, all categories of intakes declined between 2% and 3%. In addition to the reasons noted above, DJJ cites other possible factors for declining admissions, including:

- Focus on alternatives to commitment for offenders with less serious offenses;
- Wider use of graduated sanctions;
- Use of post-dispositional capacity in detention homes; and
- More systematic use by the courts of DJJ's Risk Assessment Instrument, a tool designed to provide judges with an objective measure of a juvenile's risk for reoffending.

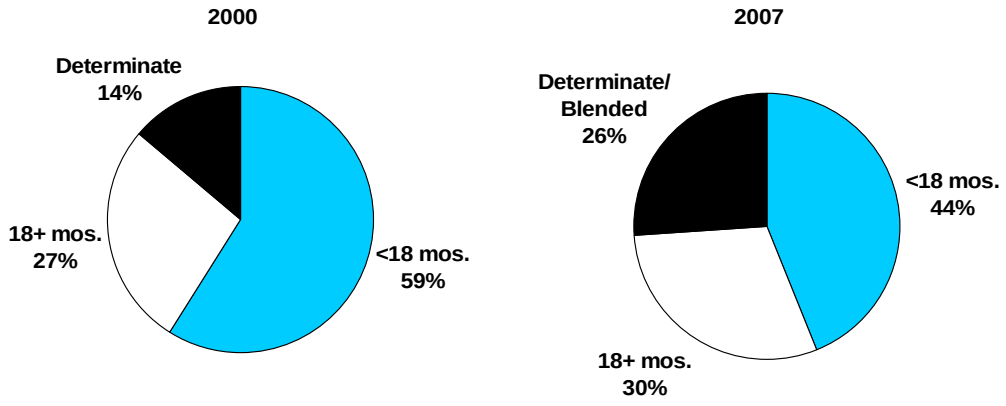
Figure 14
New Admissions to the Department of Juvenile Justice



Length of stay in DJJ facilities also affects the size of the population. Although the number of admissions to DJJ has been declining, the juveniles who are committed are staying with DJJ for longer periods of time. All indeterminately committed wards are assigned a length of stay range by DJJ based on guidelines that consider the offender's current offenses, prior offenses, and length of prior record. The length of stay range includes an early release date and late release date (for example, a 3-6 months length of stay is assigned to misdemeanants). Typically, wards will not be released before the early release date without the express approval of the Director. Reasons such as not completing mandatory treatment, such as a sex offender treatment program, or committing institutional offenses could prolong the actual length of stay beyond the assigned range. The change in commitment criteria in 2000 reduced the number of youths in the shortest length-of-stay categories, thereby increasing the overall average length of stay. Under §16.1-285.1, serious offenders can be determinately committed to DJJ until age 21. These wards have a fixed sentence and are not impacted by DJJ's length of stay policy. Determinate commitments to DJJ (including DJJ/DOC blended sanctions, allowed by *Code* since 2003) have increased as a percentage of new admissions from 6.7% in FY1998 to 13.5% in FY2007. These juveniles remain in DJJ facilities longer, on average, than juveniles with indeterminate commitments to the Department. The average sentence for a juvenile given a determinate commitment to DJJ is approximately 40 months. In addition, juveniles assigned to DJJ's mandatory sex offender program are likely to remain with DJJ for 24 to 36 months.

Longer lengths of stay have resulted in a change in the composition of the state's juvenile correctional facilities over time. Juveniles with a longer expected length of stay (i.e., juveniles likely to stay 18 months or more on an indeterminate commitment, juveniles with a determinate commitment and those with a DJJ/DOC blended sentence) now make up approximately 56% of the population, compared to 41% just seven years ago (Figure 15).

Figure 15
Juvenile Correctional Center Population by Length-of-Stay Category (on July 1st)



Simulation Forecasting and Forecast Assumptions

The simulation model used for forecasting the juvenile state-responsible offender population was designed by DJJ using a standard software package. The software allows the user to tailor simulations models for specific purposes. DJJ began using the simulation model in 2002. This software is designed to mimic the flow of offenders through the system, simulating how offenders enter and leave the system, including the timing of releases. To accurately simulate the movement of offenders through the system, actual data describing the offenders admitted and the factors affecting their lengths of stay are programmed into the simulation model.

Use of simulation forecasting requires several assumptions to be made regarding commitments and releases. Following are the important assumptions approved by the Policy Advisory Committee and incorporated into DJJ's simulation model for this year's forecast:

- The number of future admissions will reflect the admission forecast approved by the Policy Advisory Committee (see below).
- Future admissions will have the same characteristics as FY2006 and FY2007 admissions (e.g., offenses, sentence lengths, prior record adjudications, treatment assigned and completed, rate of institutional offenses, etc.).
- Future admissions will be assigned length-of-stay categories that reflect the average of actual experience during FY2006 and FY2007.
- Juveniles who will be assigned to the Department's mandatory sex offender program will comprise 6.1% of future admissions. This percentage is based on the average recorded for FY2006 and FY2007.
- Juveniles determinately committed to the Department will comprise 12.3% of future admissions. This percentage is based on the average experienced during FY2006 and FY2007.

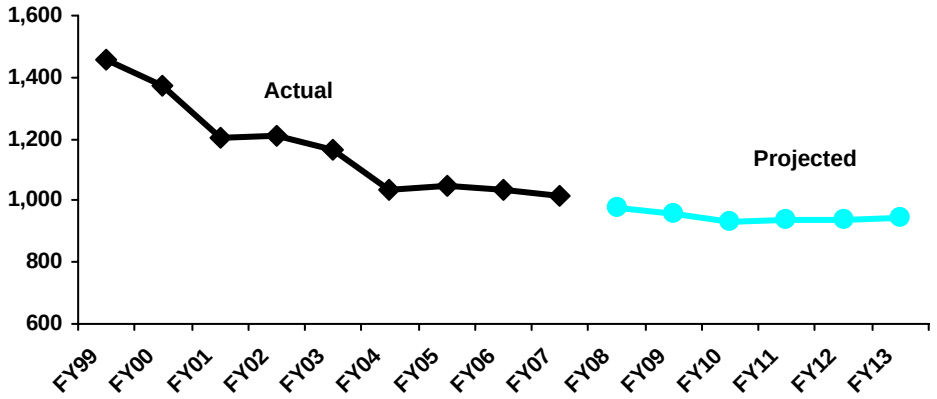
New Admissions Forecast

The admissions forecast is one of the key inputs into DJJ's simulation model. Statistical models based on historical data are not useful tools in projecting future admissions. In each of the last three years, the Policy Advisory Committee elected not to use the statistical forecast of juvenile admissions, and instead set a level admissions forecast. The Policy Advisory Committee does not believe that a decrease of the magnitude seen in recent years will continue throughout the six-year forecast horizon. The Committee, therefore, approved a flat admissions projection, set at the level of actual admissions in FY2007 (842 juveniles) for each year of the forecast (FY2008 through FY2013).

2007 Juvenile State-Responsible Offender Forecast

DJJ's simulation forecast model incorporated the new admissions forecast and other assumptions described above. The forecast generated by the simulation model suggests that the population in juvenile correctional centers will continue to shrink in the short term (Figure 16). The forecast projects a modest decline through FY2010 to 928 juveniles. Beginning in FY2011, the population of juveniles in state correctional facilities is expected to begin increasing again. This turnaround can be attributed to the longer lengths of stay for juveniles committed to DJJ today, compared to those committed just a few years ago. By June 2013, the forecast climbs to 943 juveniles.

Figure 16
Juvenile State-Responsible Offender Forecast (June Average)



Actual:

Year	Population	Change
FY00	1,373	-5.6%
FY01	1,206	-12.2%
FY02	1,208	0.2%
FY03	1,164	-3.6%
FY04	1,038	-10.8%
FY05	1,047	0.9%
FY06	1,037	-1.0%
FY07	1,013	-2.3%
	Avg. growth	-4.3%

Forecast:

Year	Population	Change
FY08	979	-3.4%
FY09	957	-2.2%
FY10	928	-3.0%
FY11	937	1.0%
FY12	940	0.3%
FY13	943	0.3%
	Avg. growth	-1.2%

Juvenile Local-Responsible Offender Population

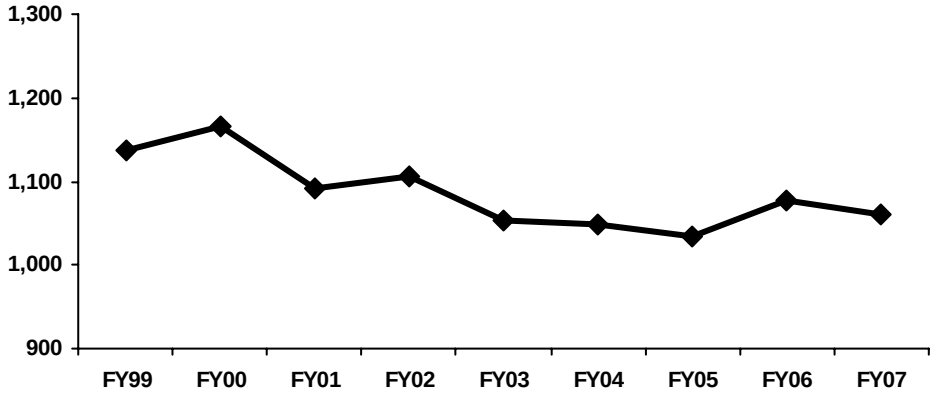
Local government or multi-jurisdictional commissions operate secure detention home programs throughout the Commonwealth. These programs provide safe and secure housing for youth accused of felonies or Class 1 misdemeanors. DJJ acts as the regulatory agency responsible for licensure of these facilities and provides partial funding for construction. Historically, the vast majority of detention home capacity has been utilized for pre-dispositional detention of juveniles pending adjudication, disposition or placement. Post-dispositional detention may serve as an alternative to state commitment and is used by the courts primarily for offenders with less serious offenses who require treatment in a secure setting. Post-dispositional confinement cannot exceed 180 days. Post-dispositional utilization typically represents less than 16% of detention home utilization. If approved by the General Assembly, the Commonwealth will provide 25% of the capital costs of detention home construction. Currently, no other payments from the state are provided to localities for operation of juvenile detention homes.

Population Stabilization

The seasonal admissions pattern and the short lengths of stay give rise to a prominent seasonal pattern in the population movement. Due to this significant seasonal variation, detention home population figures are reported as a fiscal year average for forecasting purposes.

Since FY2003, there have not been significant changes in the detention home population. The population has fluctuated between an average of 1,030 and 1,080 for each fiscal year (Figure 17). In recent years, overall statewide capacity in juvenile detention homes has not been fully utilized. For FY2006, the utilization rate was 74%. This means that, statewide, three in four detention home beds were being utilized on average at a given time.

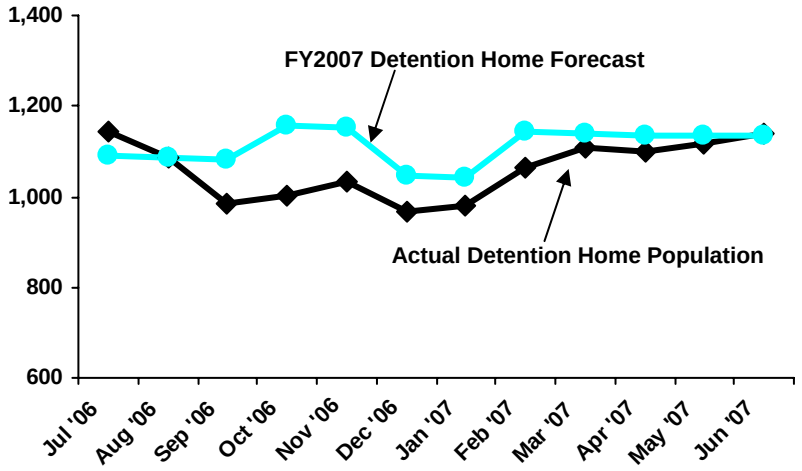
Figure 17
Juvenile Local-Responsible Offender Population (FY Average)



Accuracy of the 2006 Forecast

The forecast adopted in 2006 performed reasonably well over the course of FY2007, but was highly accurate during the last quarter of the fiscal year (Figure 18). The average detention home population during FY2007 was 1,061 juveniles. This is lower than the fiscal year forecast of 1,112. Overall, the forecast was 95.2% accurate. In June 2007, the number of youth in detention homes was just eight juveniles higher than the forecast for that month.

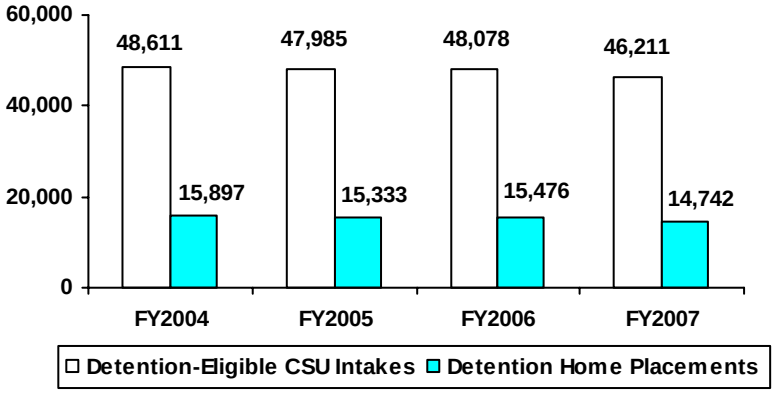
Figure 18
Accuracy of the Juvenile Local-Responsible Offender Forecast in FY2007



Factors Affecting the Juvenile Detention Home Population

Juveniles brought into a court service unit charged with a felony, a Class 1 misdemeanor, violation of a court order or a violation of probation/parole are eligible for placement in detention homes. There has been a 4.9% decrease in detention-eligible intake cases from FY2004 to FY2007 (Figure 19). Since FY2004, there has been a 7.3% decrease in total detention home placements.

Figure 19
Detention-Eligible Juveniles at Court Service Unit Intake and Subsequent Detention Home Placements



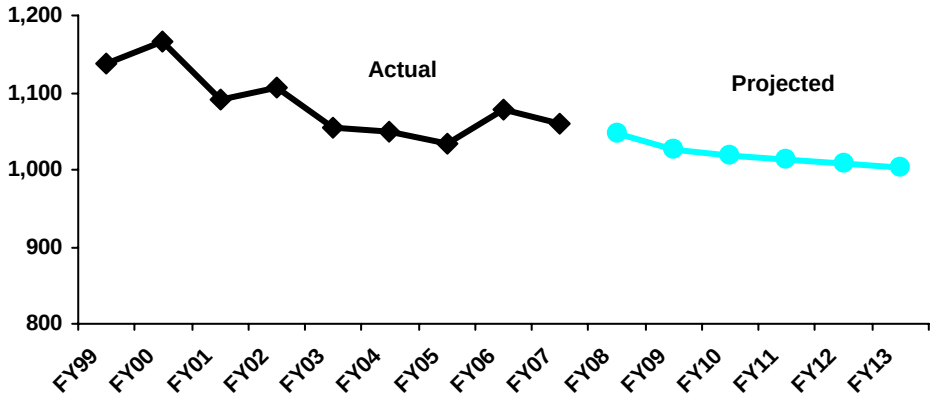
Forecasting Methodology

Juvenile local-responsible offender projections are developed using time series forecasting techniques. These same statistical techniques are used to forecast the adult local-responsible offender population. Time-series forecasting assumes there is a pattern in the historical values that can be identified, such as short and long-term trends and seasonal fluctuations. Time-series forecasting then utilizes the pattern identified in the historical data to project future values.

2007 Juvenile Local-Responsible Offender Forecast

The forecast for the juvenile local-responsible population is shown in Figure 20. The forecast accounts for the decline from FY2006 to FY2007 and projects a gradual decline in the detention home population through FY2013, when the number of juveniles in detention homes is expected to average 1,003. This forecast is only 58 juveniles fewer than the average population in FY2007.

Figure 20
2007 Juvenile Local-Responsible Offender Forecast (FY Average)



Actual:

Year	Population	Change
FY00	1,167	2.5%
FY01	1,091	-6.5%
FY02	1,106	1.4%
FY03	1,054	-4.7%
FY04	1,049	-0.5%
FY05	1,033	-1.5%
FY06	1,077	4.3%
FY07	1,061	-1.5%
	Avg. change	-0.8%

Forecast:

Year	Population	Change
FY08	1,048	-1.2%
FY09	1,026	-2.1%
FY10	1,018	-0.8%
FY11	1,013	-0.5%
FY12	1,008	-0.5%
FY13	1,003	-0.5%
	Avg. change	-0.9%

Continuing Work During FY2008

The annual process for updating the forecasts concluded in September, with the approval of the 2007 forecasts by the Policy Advisory Committee. Nevertheless, work related to the forecast continues throughout the fiscal year, and the Office of the Secretary of Public Safety will continue to oversee these efforts. To assist the Secretary's Office, the Technical Advisory Committee will examine and provide analysis in several areas.

Forecast Accuracy

The Technical Advisory Committee will submit quarterly accuracy reports for each population to the Secretary's Office. The Department of Corrections, the Department of Criminal Justice Services, and the Department of Juvenile Justice each will submit quarterly reports to the Department of Planning and Budget, which will collect the reports and submit an aggregate report to the Secretary of Public Safety. Technical staff will closely monitor the performance of the forecasts of new commitments to the Department of Corrections, as directed by the Policy Advisory Committee.

Probation Violators

Due to the significant interest in technical probation violators in recent years, efforts to identify and track these offenders will continue. The Virginia Criminal Sentencing Commission will provide data to the Department of Corrections on felony probation violators returned to circuit court. The Department of Corrections will obtain criminal conviction information from the State Police to assist in the study of probation violators sentenced to the Department.

Impact of Illegal Immigrants on Prison and Jail Populations

This year, the Policy Advisory Committee discussed the issue of illegal immigrants and their potential impact on Virginia's jail and prison populations. During FY2008, members of the Technical Advisory Committee will examine various criminal justice databases to determine which, if any, may be useful for further exploration of this issue.

Policy Changes and Initiatives Affecting the Offender Populations

Members of the Technical Advisory Committee will identify significant policy or program changes within their respective agencies that may have affected any of the prisoner populations in the past or that may impact one of the populations in the future. As these items are brought forward, the Technical Advisory Committee will evaluate each policy or program change to determine if and how it should be addressed in the development of next year's prisoner forecasts.

Appendix

2007 Policy Advisory Committee Members

Richard D. Brown
Director
Virginia Dept. of Planning & Budget

Helen Fahey
Chairwoman
Virginia Parole Board

Colonel W. Steve Flaherty
Superintendent
Virginia State Police

Robyn M. deSocio
Executive Secretary
Compensation Board

Barry R. Green
Director
Virginia Department of Juvenile Justice

Karl R. Hade
Executive Secretary
Supreme Court of Virginia

Gene M. Johnson
Director
Virginia Department of Corrections

The Honorable Ryan T. McDougle
Senate of Virginia
Courts of Justice Committee

B. J. Northington
Deputy Director
Virginia Department of Criminal Justice Services

The Honorable B. J. Roberts
Sheriff - City of Hampton
Representing the Virginia Sheriff's Association

The Honorable Beverly J. Sherwood
Virginia House of Delegates
Appropriations Committee

Chaired by the Secretary of Public Safety, John W. Marshall

2007 Policy-Technical Liaison Work Group Members

John T. Britton
Manager
Research & Management Services Unit
Virginia Department of Corrections

John G. Crooks
Policy & Planning Specialist
Virginia Dept. of Planning and Budget

Robyn M. deSocio
Executive Secretary
Compensation Board

Richard W. Hall-Sizemore
Budget & Policy Analyst
Virginia Dept. of Planning and Budget

Craig Hartley
Deputy Director
Virginia Department of Criminal Justice Services

Richard E. Hickman, Jr.
Deputy Staff Director
Senate Finance Committee

Michael D. Maul
Associate Director: Education, Transportation & Public Safety Division
Virginia Dept. of Planning and Budget

W. Stephen Pullen
Deputy Director
Administration and Finance
Virginia Department of Juvenile Justice

Paul Van Lenten, Jr.
Legislative Fiscal Analyst
House Appropriations Committee

Chaired by the Deputy Secretary of Public Safety, Clyde E. Cristman

2007 Technical Advisory Committee Members

Baron S. Blakley
Research Analyst
Virginia Department of Criminal Justice Services Research Center

Lynette B. Greenfield
Manager
Research & Evaluation Unit
Virginia Department of Juvenile Justice

Helen S. Hinshaw
Manager
Research, Evaluation & Forecast Unit
Virginia Department of Corrections

Wendy P. Naro-Ware
Vice-President
JFA Associates, LLC

Cyril W. Miller, Jr., Ph.D.
Director
Judicial Planning
Supreme Court of Virginia

Steven P. Peterson, Ph.D.
Director of Research
Virginia Retirement System

Gregory J. Rest, Ph.D.
Chief Methodologist
Joint Legislative Audit & Review Commission

Anne M. Wilmoth
Chief Information Officer
Compensation Board

Amy H. Wolstenholme
Economic Analyst
Virginia Dept. of Planning and Budget

Chaired by Meredith Farrar-Owens, Deputy Director, Virginia Criminal Sentencing Commission

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