# MEMORANDUM

TO:	The Honorable Timothy M. Kaine Governor
	The Honorable Lacey E. Putney Chairman, House Appropriations Committee
	The Honorable Charles J. Colgan, Sr. Chairman, Senate Finance Committee
	The Honorable David B. Albo Chairman, House Courts of Justice Committee
	The Honorable Henry L. Marsh, III Chairman, Senate Courts of Justice Committee
FROM:	John W. Marshall
DATE:	October 31, 2008

RE: Report on the Offender Population Forecasts (FY2009 to FY2014)

Per Item 381 A. of the 2008 Virginia Acts of Assembly, please find attached the state and local juvenile and state and local responsibility adult offender population forecasts.

Please feel free to contact me if you have any questions.

Office of the **Secretary of Public Safety** 

# REPORT ON THE OFFENDER POPULATION FORECASTS (FY2009 TO FY2014)

# To The Governor and General Assembly



**Commonwealth of Virginia** 

Richmond, October 15, 2008

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# Authority

This report has been prepared and submitted to fulfill the requirements of Item 381(A) of Chapter 879 of the 2008 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, 2008. Specifically, the Secretary must present updated forecasts for the adult state-responsible, adult local-responsible, juvenile stateresponsible, 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 2008.

# **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.

Forecasts for each offender group were based on all of the statistical and trend information known at the time that they were produced. The Policy Committee included a cautionary note concerning the potential impact that the recent economic downturn may have on these forecasts. Depending upon the depth and length of the slowdown, there may be an impact on the numbers and mix of crimes committed in the Commonwealth. Additionally, with both State and Local governments having to reduce spending, there may be a shortage of programs which judges use to divert non-violent offenders away from incarceration. If budget cuts impact community sanctions and/or treatment services, then the numbers of those sentenced to secure facilities could increase.

Adult State-Responsible Inmate Population. The largest of the four forecasts, the adult state-responsible inmate population includes offenders incarcerated in state prisons as well as state inmates housed in local and regional jails around the Commonwealth. At the end of FY2008, there were a total of 38,826 state inmates. Overall, the population grew by 2.2% during

FY2008; this is lower than the 3.9% growth seen in the previous fiscal year. Although the number of new commitments to the Department of Corrections increased by more than 12% from 2005 to 2006, there was only a modest increase in new commitments from 2006 to 2007 (approximately 0.6%). Given slower growth in FY2008, the forecast approved this year is lower than the one submitted a year ago. The population is expected to reach 44,422 inmates by the end of FY2014; an average annual growth of 2.3% is anticipated over the next six years (see table below). As required by Appropriation language, 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 FY2014, it is projected that the state-responsible population will include 2,273 technical probation violators; DOC estimates that 53% of these technical violators may be suitable for alternative programs.

Adult Local-Responsible Jail Population. The adult local-responsible jail 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. Following substantial growth of 7-8% in FY2006 and FY2007, the average local-responsible jail population declined in FY2008 by 1.7%, from 20,622 to 20,278 offenders. This decline was not expected. Indeed, there is no record of a year-to-year decline in this population during the last two decades. Although reports indicate increases in the number of arrests and court cases in 2008, data from the Department of Forensic Science (DFS) reveal a different trend that may help to explain both the significant growth in the local-responsible jail population in FY2006 and FY2007 as well as the subsequent decline in FY2008. DFS is the agency responsible for analyzing forensic evidence used in criminal trials. Between FY2003 and FY2005, the average monthly backlog of cases awaiting analysis more than doubled and then remained high during FY2006. This increase in the backlog of forensic evidence to be analyzed may have resulted in some defendants being held in jail for longer periods awaiting trial. In fact, the majority of the growth in the local-responsible jail population in FY2006 was attributable to a rise in the number of defendants in jail awaiting trial or pending additional charges. With additional positions and resources, DFS substantially reduced the forensic backlog, which by FY2008 was at its lowest level in six years. As DFS reduced its backlog, more criminal cases could be concluded and offenders sentenced. This is consistent with the changes in the local-responsible population seen in FY2008. The majority of the decline in the local-responsible population was in the number of individuals awaiting trial or pending charges; conversely, the number of sentenced felons in jail increased. The overall decline in the local-responsible jail population in FY2008, however, has resulted in a lower forecast. The population is projected to grow by 2.1% annually (less than half the annual growth projected last year) and reach an average of 23,007 offenders in FY2014 (see table below).

**Juvenile Correctional Center 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 FY2008 to that policy change. The average daily population for

the month of June 2008 was 906 juveniles. The forecast calls for a continued decline through FY2011. Beginning in FY2012, however, 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 2014, the average daily population is expected to reach 810 juveniles (see table below).

**Juvenile Detention Home 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. Between FY2003 and FY2007, there were no significant changes in the detention home population, when it remained between 1,030 and 1,080. In FY2008, the average detention home population dropped to 1,011, a 4.7% decrease. While individual facilities may be experiencing crowding, detention home capacity statewide has not been fully utilized in recent years. A modest decline in this population is anticipated through FY2014, when the number of juveniles in detention homes is projected to average 955 (see table below).

For additional information on the offender forecasts, contact Barry R. Green, through the Office of the Secretary of Public Safety, at (804) 786-5351.

	Adult		Adult	Juvenile	Juvenile
Fiscal	State-Responsible	Technical Probation Violators within the Adult	Local-Responsible	Correctional Center	Detention Home
Year	Inmate Population	State-Responsible Inmate Population	Jail Population	Population	Population
	(June 30)	(June 30)*	(FY Average)	(June Average)	(FY Average)
FY2009	39,431	1,974	20,520	847	1,000
FY2010	40,481	2,043	21,077	812	983
FY2011	41,453	2,101	21,532	791	975
FY2012	42,447	2,159	22,025	801	968
FY2013	43,424	2,216	22,523	805	961
FY2014	44,422	2,273	23,007	810	955

# **2008 Offender Forecasts**

Average annual change	2.3%	4.1%	2.1%	-1.8%	-0.9%

\* The Technical Probation Violator forecast is a subgroup of, and not in addition to, the Adult State-Responsible Inmate Forecast. The Department of Corrections estimates that 53% of these technical probation violators (shown above) 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 policy makers 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 population. This Committee also considers the effects of emerging trends or recent policy changes, making adjustments to the forecasts as it deems appropriate. The Policy Advisory Committee is made up of agency directors, one or more 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.

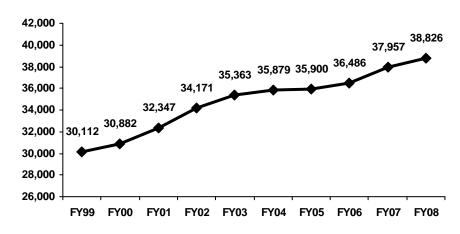
Through the consensus process, a separate forecast is produced for each of the four major correctional populations. The forecasting process benefits from rigorous quantitative analysis by the Technical Advisory Committee, detailed scrutiny by the Policy-Technical Liaison Work Group, and high-level review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

# **Adult State-Responsible Inmate Population**

The adult state-responsible inmate population includes offenders 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 FY2008, the adult state-responsible inmate population had reached 38,826 prisoners (Figure 1). Local and regional jails held 5,469 of the state inmates on that date (including those being held by contract with the DOC, those for whom 60 days have not passed following receipt of the final court order, and those awaiting transfer to a state correctional facility). The inmate population as a whole grew by 869 offenders, or 2.3%, during FY2008. This rate of growth is lower than the 4.0% growth recorded in FY2007 but slightly higher than the growth experienced in FY2006 (1.6%).

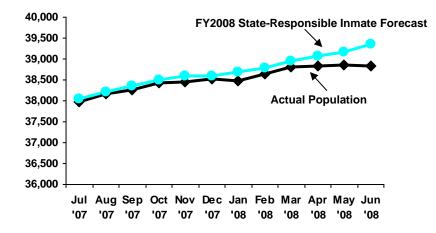




#### Accuracy of the FY2008 Forecast

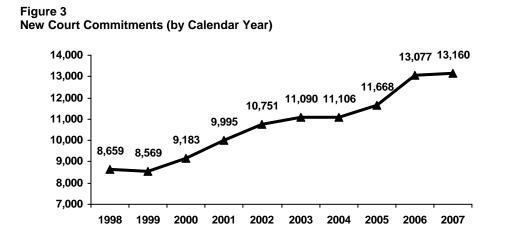
The forecast of the state-responsible inmate population adopted in 2007 proved to be highly accurate for the first half of FY2008, during which the average monthly error was just 81 inmates (Figure 2). The difference between the forecast and the actual population was greater in the second half of FY2008, averaging 263 per month. Although the forecast continued to grow through June, the actual population remained nearly level for the last four months of the fiscal year. On June 30, 2008, the actual state-responsible population was 38,826 inmates. This fell short of the June 2008 forecast by 521 prisoners.

Figure 2 Accuracy of the FY2008 Adult State-Responsible Inmate Forecast



# **Factors Affecting the Adult State-Responsible Inmate Population**

The number of offenders entering the state-responsible inmate population each year is a critical factor affecting population growth. In calendar year (CY) 2007, the most recent year of new commitment data available, the courts committed 13,160 offenders to the Department of Corrections (DOC). This is an increase of less than 1% over the number of commitments in CY2006 (Figure 3). While the CY2007 increase is modest, new commitments had jumped by more than 12% in CY2006, by far the largest single-year increase in the last decade.



Data reveal increases in arrests and court caseloads across 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. The total number of adult arrests for violent index (murder, rape, robbery and aggravated assault), property index (burglary, larceny and motor vehicle theft), and drug crimes increased by nearly 12% between CY2005 and CY2007. One departure from the overall trend is the 3% decline from CY2006 to

CY2007 in the number of adults arrested for violent index crimes. Court data indicate increasing felony and misdemeanor caseloads, as well as re-instatement (probation violation) hearings. For example, the number of felony defendants processed through Virginia's circuit courts jumped by 9.5% in CY2006 and increased another 3.5% in CY2007.

Data suggest that other factors also have had an impact on the state-responsible population. Longer lengths-of-stay for violent offenders and lower parole grant rates for inmates sentenced prior to the abolition of parole have contributed to the larger population.

#### Impact of Truth-in-Sentencing/No Parole

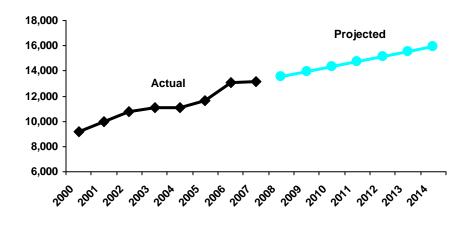
In 1994, the General Assembly passed legislation to abolish discretionary parole release and to implement a system known as "truth-in-sentencing" in Virginia. Felony offenders must now serve at least 85% of their prison or jail terms. New sentencing guidelines were implemented in 1995. Under these guidelines, 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 enhancements trigger recommendations that are up to six times longer than historical 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-ofstay in prison is longer today than prior to enactment of truth-in-sentencing. Many violent offenders have received very lengthy sentences under the no-parole policy and remain incarcerated (and are therefore not included in the time-served data for released offenders).

# **New Court Commitment Forecast**

As noted above, the number of new commitments to DOC each year is a critical factor affecting population growth. To aid in the development of the overall inmate forecast, analysts first develop a projection of future commitments to the Department. The new commitment forecast is the total of 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 did not continue into CY2007. In CY2007, new commitments to DOC increased by less than 1%. It is projected that the number of new commitments will increase by an average of 2.8% annually through CY2014 (Figure 4). This is only slightly higher than the average growth over the most recent five years (CY2003-CY2007), when the exceptionally large growth recorded in CY2006 is excluded. It is expected that female new commitments will continue to grow faster (3.8% on average per year) than male new commitments (2.6% on average per year) through CY2014.

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



Actual:	Year	Commitments	Change	Forecast:	Year	Commitments	Change
	2000	9,183	7.2%		2008	13,548	2.9%
	2001	9,995	8.8%		2009	13,974	3.2%
	2002	10,751	7.6%		2010	14,375	2.9%
	2003	11,090	3.2%		2011	14,770	2.8%
	2004	11,106	0.1%		2012	15,161	2.6%
	2005	11,668	5.1%		2013	15,553	2.6%
	2006	13,077	12.1%		2014	15,943	2.5%
	2007	13,160	0.6%				
		Avg. growth	5.6%			Avg. growth	2.8%

#### **Forecasting Methodologies**

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 Corrections produces one of the state-responsible forecast models and the Department of Planning and Budget (DPB) generates the other. To develop its forecast, DOC utilizes computer simulation software designed to mimic the flow of offenders through 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. DPB projections are developed using statistical techniques that, collectively, are known as time-series forecasting. Time-series forecasting utilizes historical patterns, trends, and seasonal variations to project future values; significant policy changes made in past years can be quantified and included in the statistical model. The Technical Advisory Committee scrutinizes both forecasts, recommending the one with the best set of statistical properties to the Policy-Technical Liaison Work Group and the Policy Advisory Committee.

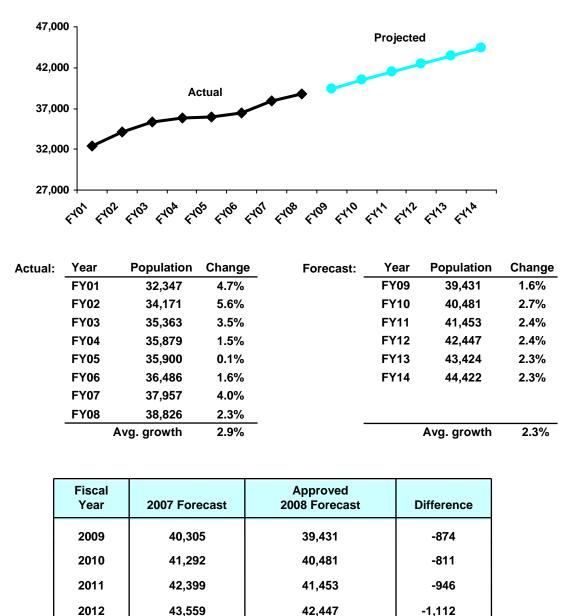
#### **Adult State-Responsible Inmate Forecast**

The Policy-Technical Liaison Work Group and the Policy Advisory Committee discussed in great detail recent trends throughout Virginia's criminal justice system, including the decline in the local-responsible jail population during FY2008 and its potential impact on the state inmate population. The local-responsible jail population, and in particular the number of offenders awaiting or pending trial, is seen by many as an early indicator of what will happen in the state inmate population in subsequent months, since many of the defendants held in jail eventually will be sentenced to serve a state prison term. Since it typically takes nine months to process a felony charge through Virginia's court system, the impact of changes in the localresponsible jail population could be felt in the state inmate population approximately nine to twelve months later.

After careful consideration, the Policy Advisory Committee adopted the forecast recommended by the Technical Advisory Committee and the Liaison Work Group, but elected to make an adjustment to the forecast. The Committee reviewed the population figures for the first month of the new fiscal year, July 2008. Because the state-responsible inmate forecast had remained nearly level from March-June 2008, the forecast for July 2008 exceeded the actual population by 281 inmates. To correct for this difference at the very beginning of the forecast period, the Committee subtracted 300 from each month of the forecast during FY2009. With that adjustment made, the Committee discussed that some of the growth that would have occurred between late FY2008 and early FY2009 may simply occur later. Therefore, the Committee adjusted the FY2010 forecast to allow for a total growth of 1,050 inmates over the course of the year (instead of a growth of 940 inmates, as in the original forecast). Finally, for FY2011 through FY2014, the Policy Advisory Committee applied the projected growth rates from the original forecast (2.4% for FY2011, 2.4% for FY2012, 2.3% for FY2013 and 2.3% for FY2014). These adjustments resulted in the forecast shown in Figure 5. The number of stateresponsible inmates is expected to reach 44,422 by the end of FY2014 (Figure 5). This forecast projects an average annual growth of 2.3% over the next six years.

Given the slower growth in FY2008 compared to the previous fiscal year, the forecast approved this year is lower than the one submitted a year ago.

Figure 5 Adult State-Responsible Inmate Forecast (as of June 30)



Figures re	present the population	on as of June 30 for each y	ear reported.

44,744

N/A

2013

2014

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 6). Over the next six years, the male inmate population is projected to increase by an average of 2.2% annually, while the female inmate population is projected to grow by 3.4% on average each year.

43,424

44,422

-1,320

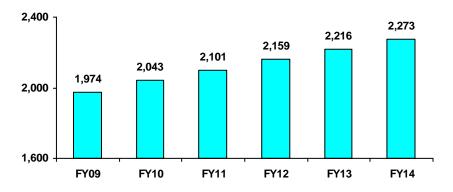
			_		_	
Fiscal Year	Males	Percent Change		Fiscal Year	Females	Percent Change
FY09	36,299	1.4%	]	FY09	3,132	3.4%
FY10	37,230	2.6%	1	FY10	3,251	3.8%
FY11	38,091	2.3%	1	FY11	3,362	3.4%
FY12	38,973	2.3%	1	FY12	3,474	3.3%
FY13	39,839	2.2%	1	FY13	3,585	3.2%
FY14	40,725	2.2%	1	FY14	3,698	3.1%
Projected average growth FY2009 – FY2014: 2.2%			-		ed average gro 9 – FY2014: 3	

Figure 6 Adult State-Responsible Inmate Forecast by Gender (as of June 30)

Item 381(A) of Chapter 879 of the 2008 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. By the end of FY2014, it is projected that the state-responsible population will include 2,273 technical probation violators (Figure 7). Based on a recent study, DOC estimates that only 53% of these technical violators sentenced to the Department, or 1,205, may be suitable for alternative programs.

# Figure 7





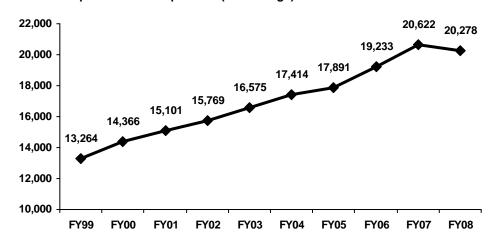
\* Based on a recent study, the Department of Corrections estimates that 53% of these technical violators received by the Department may be suitable for alternative programs. DOC determined that approximately 47% of technical violators admitted are likely not good candidates for alternatives due to convictions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

# **Adult Local-Responsible Jail Population**

The adult local-responsible jail 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 FY2008, local-responsible prisoners on average accounted for approximately 71% of the total jail population. State-responsible offenders and federal prisoners averaged 20% and 7% 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 Change**

The local-responsible jail population fluctuates seasonally. The population peaks each year during late summer and early fall. Jails record the lowest population levels during the winter months. Due to this significant seasonal variation, the average local-responsible population over the entire fiscal year is most often used for forecasting purposes. Following substantial growth of 7-8% in FY2006 and FY2007, the average local-responsible jail population declined in FY2008 by 1.7%, from 20,622 to 20,278 offenders (Figure 8). There is no record of a year-to-year decline in this population during the last two decades.





Local-responsible jail prisoners fall into one of four categories: unsentenced awaiting trial, sentenced but pending additional charges, sentenced felons serving a term of 12 months or less, and sentenced misdemeanants. Rates of growth and decline have varied across these four categories. For example, the majority of the growth in FY2006 can be attributed to a rise in the number of persons awaiting trial and those with additional charges pending, which increased that

year by 7.7% and 11.7%, respectively (Figure 9). The bulk of the growth in FY2007 continued to be in these two categories, but sentenced misdemeanants also grew by 6.8%. In FY2008, all categories except sentenced felons declined. Nearly all of the decrease in the overall population, however, was due to a drop in the number of individuals awaiting trial or pending charges.

Category	FY2006	Change	FY2007	Change	FY2008	Change
Unsentenced Awaiting Trial	8,314	+7.7%	8,926	+6.8%	8,771	-1.7%
Sentenced - Pending Additional Charges	5,420	+11.7%	5,889	+10.1%	5,692	-3.3%
Sentenced Local Felons	2,986	+5.6%	3,112	+3.1%	3,136	+0.8%
Sentenced Misdemeanants	2,512	+0.8%	2,694	+6.8%	2,679	-0.6%
Total Local-Responsible Jail Population	19,233	+7.5%	20,622	+7.2%	20,278	-1.7%

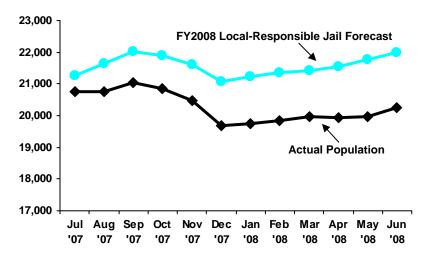
#### Figure 9 Growth in Local-Responsible Jail Population Categories

Data are based on the average population for each fiscal year reported.

## Accuracy of the FY2008 Forecast

The decline in the local-responsible jail population during FY2008 was not expected. The forecast had projected a growth of 4.2% for FY2008. The local-responsible jail population forecast exceeded the actual population throughout the fiscal year, and the margin of error grew larger over the course of the year (Figure 10). The average local-responsible population for FY2008 was 20,278 offenders. The forecast average for FY2008 was 21,568, a difference of 1,290 prisoners.





#### Factors Affecting the Adult Local-Responsible Jail Population

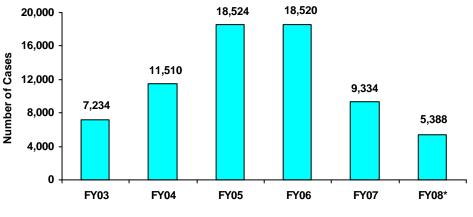
Numerous factors have an impact on the local-responsible jail population, such as arrests, bail release decisions, case processing time in the courts (which affects the time served awaiting trial), and lengths-of-stay for convicted offenders serving a sentence. As noted above, the number of adults arrested in Virginia has been climbing, despite reductions in the crime rate (crimes per 100,000 population) in recent years. The total number of adult arrests for violent index (murder, rape, robbery and aggravated assault), property index (burglary, larceny and motor vehicle theft), and drug crimes increased by nearly 12% between CY2005 and CY2007. A notable exception to this trend is the 3% decline from CY2006 to CY2007 in the number of adults arrested for violent index crimes.

Court data indicate increasing felony and misdemeanor caseloads and re-instatement (probation violation) hearings. For example, the number of felony defendants processed through Virginia's circuit courts jumped by 9.5% in CY2006 and increased another 3.5% in CY2007. Court data also reveal, however, that some improvements have been made in the processing of felony cases through the courts. The percent of felony cases given a preliminary hearing in the general district court within the time processing guidelines adopted by the Supreme Court of Virginia jumped from 66% in CY2006 to 70% in CY2007. At the same time, the percent of felony cases concluded in circuit court within the time processing guidelines rose from 45% to 46%. While these are modest improvements, they are a reversal of the recent trend towards longer case processing times. The processing of misdemeanor cases, however, did not improve and fewer cases were concluded within the time processing guidelines for general district court.

Jail data suggest that bail release decisions are being made sooner, at least in some facilities. The number of days served in jail prior to release on bond decreased in FY2008 from an average of 4.7 days to 4.1 days for several large jails, including Richmond City, Norfolk and Virginia Beach. For local-responsible offenders serving a sentence, the average length-of-stay statewide increased from 55.8 days to 57.3 days.

Although reports indicate increases in the number of arrests and court cases in 2008, data from the Department of Forensic Science (DFS) reveal a different trend that may help to explain both the significant growth in the local-responsible jail population in FY2006 and FY2007 as well as the subsequent decline in FY2008. DFS is the agency responsible for analyzing forensic evidence used in criminal trials. Between FY2003 and FY2005, the average monthly backlog of cases awaiting analysis more than doubled (from 7,234 to 18,524) and the backlog remained high during FY2006 (Figure 11). This increase in the backlog of forensic evidence to be analyzed may have resulted in some defendants being held in jail for longer periods awaiting trial. In fact, the majority of the growth in the local-responsible jail population in FY2006 was attributable to a rise in the number of defendants in jail awaiting trial or pending charges. With additional positions and resources, DFS substantially reduced the forensic backlog, which by FY2008 was at its lowest level in six years. As DFS reduced its backlog, more criminal cases could be concluded and offenders sentenced. This is consistent with the changes in the local-responsible population seen in FY2008. The majority of the decline in the local-responsible population was in the number of individuals awaiting or pending trial; conversely, the number of sentenced felons in jail increased in FY2008.

Figure 11 Department of Forensic Science Average Monthly Case Backlog



\* FY2008 figure reflects average monthly backlog through May 2008.

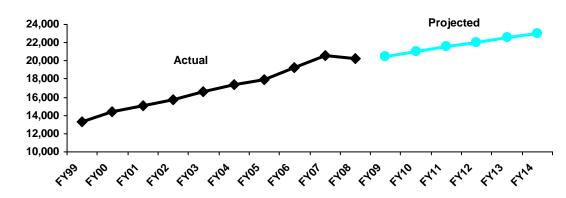
#### **Forecasting Methodology**

Local-responsible population projections are developed using statistical techniques known as time-series forecasting. Time-series methodology has been used in Virginia to forecast local jail populations since 1991. Time-series forecasting assumes that 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. Significant policy changes made in past years can be quantified and included in the statistical model. Time-series forecasting then utilizes the pattern, trend, and seasonal variation identified in the historical data to project future values.

## **Adult Local-Responsible Jail Forecast**

The overall decline in the local-responsible jail population in FY2008 has resulted in a lower forecast. The population is projected to grow by 2.1% annually (less than half the annual growth projected last year) and reach an average of 23,007 offenders in FY2014 (Figure 12). By FY2013, this forecast is lower than the previous year's forecast by nearly 5,000 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. Given the dramatic change from strong growth to decline in FY2008, the Policy Advisory Committee will receive monthly reports on the local-responsible jail population and determine if any action is necessary based on the most recent available data.

Figure 12 2007 Adult Local-Responsible Offender Forecast (FY Average)



Actual:	Year	Population	Change	Forecast:	Year	Population	Change
	FY01	15,101	5.1%	-	FY09	20,520	1.2%
	FY02	15,769	4.4%		FY10	21,077	2.7%
	FY03	16,575	5.1%		FY11	21,532	2.2%
	FY04	17,414	5.1%		FY12	22,025	2.3%
	FY05	17,891	2.7%		FY13	22,523	2.3%
	FY06	19,233	7.5%		FY14	23,007	2.1%
	FY07	20,622	7.2%			-	
	FY08	20,278	-1.7%				
		Avg. growth	4.4%	-		Avg. growth	2.1%

Year	2007 Forecast	Approved 2008 Forecast	Difference
FY2009	22,624	20,520	-2,104
FY2010	23,769	21,077	-2,692
FY2011	24,983	21,532	-3,451
FY2012	26,188	22,025	-4,163
FY2013	27,394	22,523	-4,871
FY2014		23,007	

Figures represent the average population for each fiscal year reported.

# **Juvenile Correctional Center 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 87% of the juveniles committed to the DJJ receive an indeterminate sentence. This means that the 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 at a later date. 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 13). The average daily population for the month of June 2008 was 906. 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 the Department. 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 the Department and on the population of juveniles in DJJ's correctional centers. Recent declines cannot be directly attributed to that change in legislation.

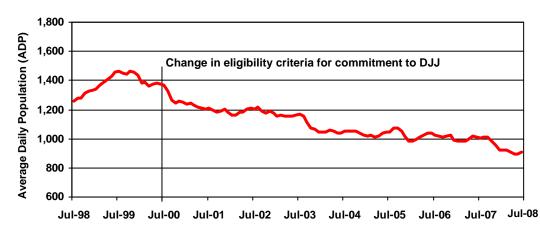


Figure 13 Juvenile Correctional Center Population

# Accuracy of the FY2008 Forecast

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The juvenile correctional center forecast was extremely accurate for the first half of FY2008 (Figure 14). While the forecast increased slightly during the second half of the fiscal year, the actual population continued to decline. For June 2008, the average juvenile correctional center population was 906, which fell short of the forecast by 73 juveniles.

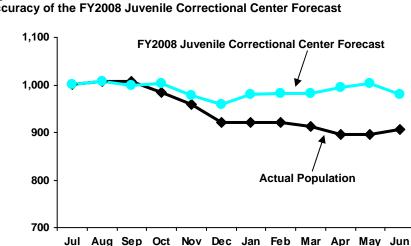


Figure 14 Accuracy of the FY2008 Juvenile Correctional Center Forecast

#### **Factors Affecting the Juvenile Correctional Center Population**

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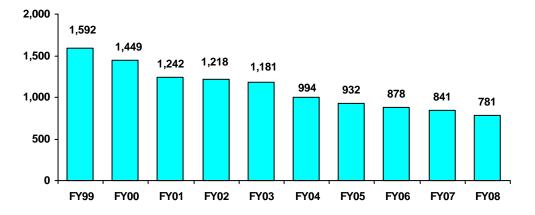
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As noted above, the population of youth in DJJ facilities has been declining for several years. FY2008 was no exception to this overall trend. Over the last decade, admissions to juvenile correctional centers have dropped more than 50% (Figure 15). 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 Department. 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 7.2% between FY2004 and FY2008. In FY2008, all categories of intakes declined, with intakes for person felonies dropping the most (down 9%). 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 (RAI), a ٠ tool designed to provide judges with an objective measure of a juvenile's risk for re-offending.

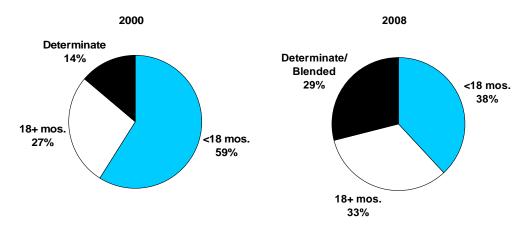
Figure 15 New Admissions to the Department of Juvenile Justice



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 no longer include those who previously received relatively short sentences, resulting in longer average lengths of stay. All indeterminately committed residents 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). 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-ofstay 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 13.4% in FY2008. 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 the Department'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 62% of the population, compared to 41% just eight years ago (Figure 16).

Figure 16 Juvenile Correctional Center Population by Length-of-Stay Category (on July 1<sup>st</sup>)



# **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 FY2007 and FY2008 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 FY2007 and FY2008.
- Juveniles who will be assigned to the Department's mandatory sex offender program will comprise 6.3% of future admissions. This percentage is based on the average recorded for FY2007 and FY2008.
- Juveniles determinately committed to the Department will comprise 13.7% of future admissions.

#### **New Admissions Forecast**

The admissions forecast is one of the key inputs into DJJ's simulation model. Given the continuing decline in juvenile admissions, however, 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. Each year, the Policy Advisory Committee set the admissions forecast equal to the actual number of admissions during the most recent fiscal year and that same figure was used for each year of the forecast period. Admissions have continued to decline and, therefore, have fallen short of these projections. The Policy Advisory Committee does not believe, however, that a decrease of the magnitude seen in recent years will continue indefinitely. This year, the Committee approved an admissions projection that drops the first year of the forecast period before leveling off for the remainder of the forecast horizon (Figure 17). For this admissions projection, the FY2009 figure from the statistical model was used. Projected admissions for FY2010 through FY2014 are based on an average of FY2009 and FY2010 figures from the statistical model.

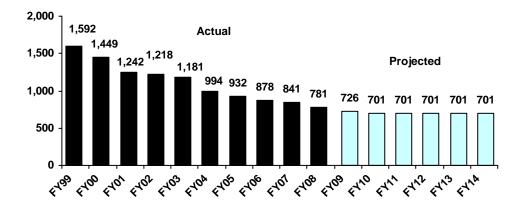
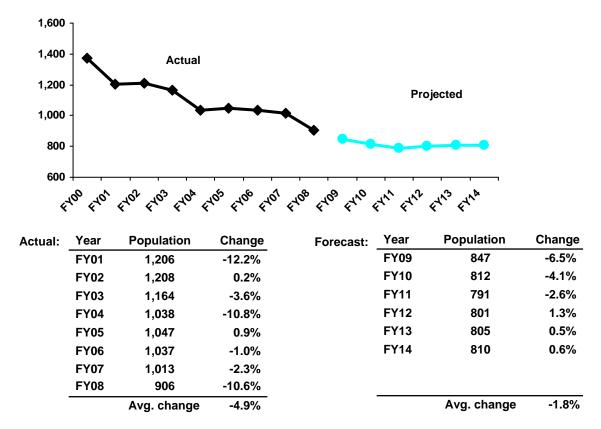


Figure 17 Juvenile Correctional Center Admissions Projection

#### **Juvenile Correctional Center Forecast**

DJJ's simulation forecast model incorporated the new admissions projection 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 18). The forecast projects a decline through FY2011 to 791 juveniles. Beginning in FY2012, however, 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 2014, the forecast climbs to 810 juveniles.

Figure 18 Juvenile Correctional Center Forecast (June Average)



# **Potential Impact of Budget Reductions**

The Policy Advisory Committee discussed the potential impact of recent and expected future budget reductions on the juvenile correctional center population. Budget reductions will likely result in decreased funding for alternative programs and community services for juveniles who come in contact with the criminal justice system. As resources for alternative programs and community services diminish, juvenile court judges may feel they have limited options for placing the juveniles who come before them. This could result in additional commitments to DJJ. Although the forecast projects the decline in the population to continue through FY2011, it is possible that this population could begin to increase during the next two years. The Policy Advisory Committee will be closely monitoring the potential impact of budget reductions on the correctional center population during the coming months.

### **Juvenile Detention Home Population**

Local government or multi-jurisdictional commissions operate secure detention home programs throughout the Commonwealth. The programs provide safe and secure housing for youth accused of felonies or Class 1 misdemeanors. The Board of Juvenile Justice promulgates regulations and is responsible for licensure of these facilities. DJJ, based on funding included in the Appropriation Act, provides up to 50% of the cost of construction of detention homes and provides a portion of the cost of operations. 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 about 15% of detention home capacity.

# **Population Change**

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.

Between FY2003 and FY2007, there were no significant changes in the detention home population; the population fluctuated between an average of 1,030 and 1,080 for each fiscal year (Figure 19). In FY2008, the average detention home population dropped to 1,011, a 4.7% decrease from the previous year. While individual facilities may be experiencing crowding, detention home capacity statewide has not been fully utilized in recent years. For FY2008, the utilization rate was approximately 71%. This means that, statewide, three in four detention home beds were being utilized on average on a given day.

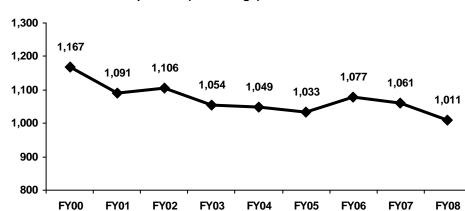
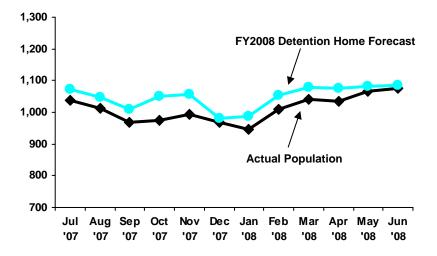


Figure 19 Juvenile Detention Home Population (FY Average)

#### Accuracy of the FY2008 Forecast

Figure 20

The forecast performed reasonably well over the course of FY2008, but was highly accurate during the last quarter of the fiscal year (Figure 20). The average juvenile detention home population for FY2008 was 1,011 offenders. This was lower than the fiscal year forecast of 1,048. In June 2008, however, the forecast was just 10 higher than the actual number of youth in detention homes.

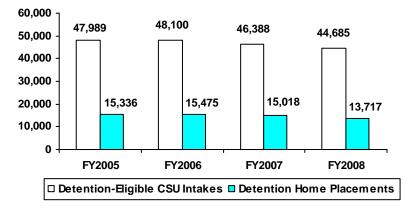


Accuracy of the FY2008 Juvenile Detention Home Forecast

#### **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 6.9% decrease in detention-eligible intake cases from FY2005 to FY2008, with half of that drop occurring in the last fiscal year (Figure 21). Since FY2005, there has been a 10.6% decline in total 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 that there is a pattern in the historical values that can be identified, such as short and long-term trends and seasonal fluctuations. Significant policy changes made in past years can be quantified and included in the statistical model. Time-series forecasting then utilizes the pattern identified in the historical data to project future values.

# **Juvenile Detention Home Forecast**

The forecast for the juvenile local-responsible population is shown in Figure 22. The forecast accounts for the decline from FY2007 to FY2008 and projects a gradual decline in the detention home population through FY2014, when the number of juveniles in detention homes is expected to average 955. This forecast is only 56 juveniles fewer than the average population in FY2008.

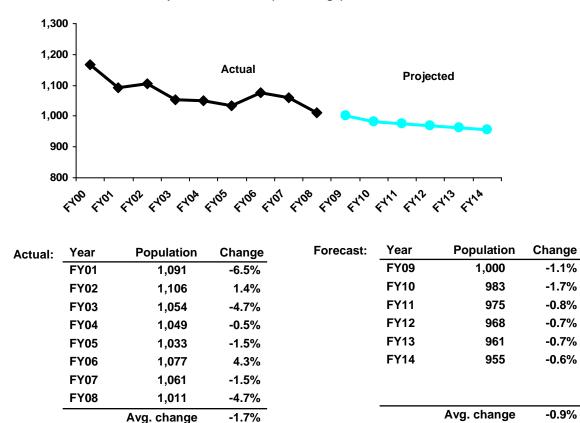


Figure 22 Juvenile Detention Home Population Forecast (FY Average)

# **Potential Impact of Budget Reductions**

As with the juvenile correctional center population, the Policy Advisory Committee discussed the implications of recent and expected future budget reductions for the juvenile detention home population. Due to decreased funding of alternative programs and community services for youth, the number of detention home placements could rise. This could result in an increase in the detention home population during the next two years. The Policy Advisory Committee will be closely monitoring the potential impact of budget reductions on the detention home population during the coming months.

# **Continuing Work during FY2009**

The annual process for updating the forecasts concluded in September, with the approval of the 2008 forecasts by the Policy Advisory Committee. Nevertheless, work related to the forecast will continue 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 and the Policy-Technical Liaison Work Group will meet regularly during the year and will provide analysis in several areas. These are discussed below.

# **Forecast Accuracy**

The Technical Advisory Committee will submit monthly accuracy reports for each population to the Secretary's Office. Given the unprecedented decline in the local-responsible jail population in FY2008, technical staff will continue to examine factors that may be affecting this population.

# **Potential Impact of Budget Reductions**

Although budget reductions were made in the previous 12 to 18 months, additional reductions are expected during FY2009 and FY2010. While the full impact of these cuts is not yet known, budget reductions will likely result in decreased funding of alternative programs and community services for offenders. With fewer options available, the number of offenders confined may rise. This may be particularly true for the juvenile correctional center and detention home populations. The Policy Advisory Committee will monitor the possible impact of budget reductions on the forecasted populations.

# **Policy Changes and Initiatives Affecting the Offender Populations**

Technical Committee members 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. The Policy Advisory Committee will be informed of these items as they are identified. In addition, the Technical Advisory Committee will evaluate each policy or program change to determine how it should be addressed in the development of next year's prisoner forecasts.

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Tama Celi, Ph.D., John E. Turner, and Warren McGehee of the Virginia Department of Corrections James C. Creech, Ph.D., of the Virginia Criminal Sentencing Commission Fang Qian of the Virginia Department of Juvenile Justice Howard Sanderson of Virginia Commonwealth University