

**MASSACHUSETTS DEPARTMENT OF CORRECTION  
TEN-YEAR PRISON POPULATION PROJECTIONS  
2009 – 2019**

**Prepared by**

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# MASSACHUSETTS DEPARTMENT OF CORRECTION TEN-YEAR PRISON POPULATION PROJECTIONS

## I. INTRODUCTION

The JFA Institute has been tasked to produce a ten year secure criminally sentenced population projection by the Massachusetts Department of Correction (MADOC). JFA was also tasked to produce projections of both the awaiting trial and civil commitment populations. The JFA Institute (JFA), under the direction of Ms. Wendy Ware, utilized the Wizard simulation model to produce prison population projections for male and female sentenced offenders. The contents of this briefing document present JFA's methodology, analysis of trends used to produce a simulation model of the Massachusetts prison system and the projections it has generated. The awaiting trial and civil commitment forecasts are included in the projections section of this document with some supporting analysis.

## II. BACKGROUND

The forecast of correctional populations in Massachusetts was completed using Wizard projection software. Differing from a statistical model, this computerized simulation mimics the flow of offenders through the state's prison system over a ten-year forecast horizon and produces monthly projections of key inmate groups. Due to the complex sentencing structure of Massachusetts, a conventional statistical formula, ARIMA or equating to the state's demographic population, is not adequate. Instead, JFA utilizes a more sophisticated method. Constructing a unique Massachusetts "specific" simulation model for forecasting prison populations can not only provide the needed bedspace forecast requirements, but can also incorporate various assumptions about sentencing laws and admissions to prison.

Wizard represents a new version of the previously used Prophet Simulation model and introduces many enhancements. It is also expected that JFA will provide training to the DOC over the next few years so that MADOC staff will be able to utilize the software independently of JFA staff.

Because Wizard attempts to mimic the state's sentencing structure and the flow of prisoners to and from the MADOC, it must look at a wide array of data that have both a direct and indirect impact on prison population growth.

These factors are graphically portrayed in the flow diagram shown on page 5. As the chart shows, a variety of factors underpin a correctional system's long-term projection. These factors can be separated into two major categories – external and internal.

*External* factors reflect the interplay of demographic, socio-economic and crime trends that produce arrests, and offenders' initial entry into the criminal justice process. Criminologists have long noted certain segments of the population have higher rates of

chances of becoming involved in crime, being arrested and being incarcerated. This is known as the “at-risk” population, which generally consists of younger males. The high crime rate ages are 15-25, while the high adult incarceration rate is between the ages of 18 and 35. When the at-risk population is expected to increase in a jurisdiction, one can also expect some additional pressure on criminal justice resources, all things being equal.

*Internal* factors reflect the various decision points within the criminal justice system that cumulatively determine prison admissions and length of stay (LOS). These decisions begin with police and end with correctional officials who, within the context of the court-imposed sentences, have the authority to release, recommit, give and restore a wide array of good time credits, and offer programs that may reduce recidivism.<sup>1</sup>

For example, one of the most difficult numbers to estimate is the number of prison admissions for the next five years. As suggested by Figure 1, people come to prison for three basic reasons: 1) they have been directly sentenced by the courts to a prison term (new court commitments); 2) they have failed to complete their term of probation and are now being sentenced to prison for a violation or new crime; or, 3) they have failed their term of post-release supervision (such as parole) and are being returned to prison for a new crime or a technical violation. Almost two-thirds of the estimated 600,000-plus people who are admitted to prison are those who have failed to complete probation or parole. A projection model thus should have a “feedback loop” that captures the relative rate of probation and parole failures.

Since each state has a unique sentencing structure, the model developed for each state must take into account the state’s sentencing laws. Massachusetts, like a number of states, has adopted what is known as Truth in Sentencing laws (TIS). Unlike, most states, the Massachusetts legislature has yet to enact sentencing guidelines into law. They are currently being used by judges as a loose guide in sentencing and hold no ability to limit discretionary sentencing.

Typically, TIS states have established that persons convicted of violent crimes must serve a certain percentage of their prison terms before being eligible for release. Based on the federal sentencing guidelines and encouraged with funding provided by the US Congress and the Clinton administration in the 1990s, the standard for being a TIS state was arbitrarily set at 85% of the sentence imposed.

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<sup>1</sup> The amount of discretion correctional authorities have to release prisoners varies according to each state’s sentencing structure. The majority of states have indeterminate sentencing which offers the greatest amount of discretion by virtue of the fact that parole boards are authorized to release inmates once they have served their minimum sentence. But even most states with determinate sentencing also provide some level of discretion to release prisoners based on good-time and special program credits.

## A. SENTENCING IN MASSACHUSETTS<sup>2</sup>

The Massachusetts Sentencing Commission was established in the spring of 1994 by the truth-in-sentencing law - Chapter 432 of the Acts of 1993 (later codified as G.L. c. 211E). The commission is comprised of fifteen members with diverse criminal justice perspectives and philosophies, including three judges, three prosecutors, and three defense counsel, along with other representatives of the criminal justice community and victims. The commission submitted its *Report to the General Court* on April 11, 1996, pursuant to c. 211E. This report was unanimously adopted by commission members as the fairest and most effective reform of criminal sentencing. The sentencing guidelines legislation (not yet enacted) reflected the recommendations of this report.

The sentencing guidelines are based on a grid-type model, with offenses classified on the vertical axis according to seriousness and criminal history classified on the horizontal axis according to severity. Approximately 1800 offenses are ranked according to nine levels of seriousness. These offenses are compiled in the Master Crime List which is incorporated into the legislation. Criminal history is classified according to five categories based on the nature and seriousness of the criminal record: *Serious Violent Record; Violent or Repetitive Record; Serious Record; Moderate Record; and, No/Minor Record.*

A sentencing guidelines range is established in each cell in the sentencing grid where the offense seriousness level and the criminal history category intersect. To sentence within the guideline range, a judge would select the maximum sentence from the sentencing range in the applicable cell on the grid. The minimum sentence, which represents the parole eligibility date, is automatically set at two-thirds of the maximum sentence.

Ordinarily, a judge imposes a sentence within the guideline range, but, when there are aggravating or mitigating circumstances, the judge may depart from the range with the requirement that the judge set forth in writing the reasons for departure. Any departure must be based on a finding of one or more mitigating or aggravating circumstances. The legislation contained a non-exclusive list of aggravating and mitigating factors to guide the sentencing judge.

In order to facilitate the integration of intermediate sanctions into the sentencing guidelines, the legislation incorporated three "zones" into the sentencing guidelines grid - an incarceration zone, where the sentencing ranges would call for a period of incarceration; an intermediate sanctions zone, where the sentencing ranges would call for an intermediate sanction; and, a discretionary zone, where the sentencing ranges would include both a period of incarceration and an intermediate sanction option to be selected at the discretion of the judge. When a defendant is convicted on multiple

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<sup>2</sup> Massachusetts Guidelines Legislation Background;  
<http://www.mass.gov/courts/admin/sentcomm/background.html>

charges, the court may impose either concurrent or consecutive sentences. If the multiple convictions arose from the same criminal conduct, the judge may impose consecutive sentences up to twice the upper limit of the guideline range of the governing offense (i.e., the most serious offense of conviction). If the consecutive sentences exceed twice that upper limit, it is considered a departure, and the judge would be required to provide written reasons for imposing consecutive sentences which exceed twice that upper limit.

In reference to mandatory minimum sentencing, the Commission established three general categories of offenses with mandatory minimum sentences that are addressed in the legislation - firearms offenses, OUI offenses, and drug offenses.

*Firearms and OUI Offenses.* The sentencing guidelines legislation does not permit departures below the mandatory minimum terms for firearms offenses or for OUI offenses, with the exception that long term residential alcohol treatment programs, approved by the Office of Community Corrections, would be available as intermediate sanctions for OUI offenders up to the third OUI conviction.

*Drug Offenses.* The legislation provides for a limited exception with respect to mandatory sentencing for drug offenses. These offenses are integrated into the guidelines grid. However, the mandatory penalties for these drug crimes are not abolished under the guidelines. A judge is only permitted to impose a sentence below the mandatory minimum term when the judge provides written reasons for doing so even though the judge may be imposing a sentence that is within the guideline range. The standard for going below the mandatory minimum term is more stringent than the ordinary standard for departure from a guideline range, and the legislation would not permit a sentence below the mandatory minimum term for any defendant who has a prior conviction for a serious drug offense. Finally, the judge always has the option to impose the mandatory minimum term and such sentence shall not be considered a departure even if the mandatory minimum term exceeds the guideline range.

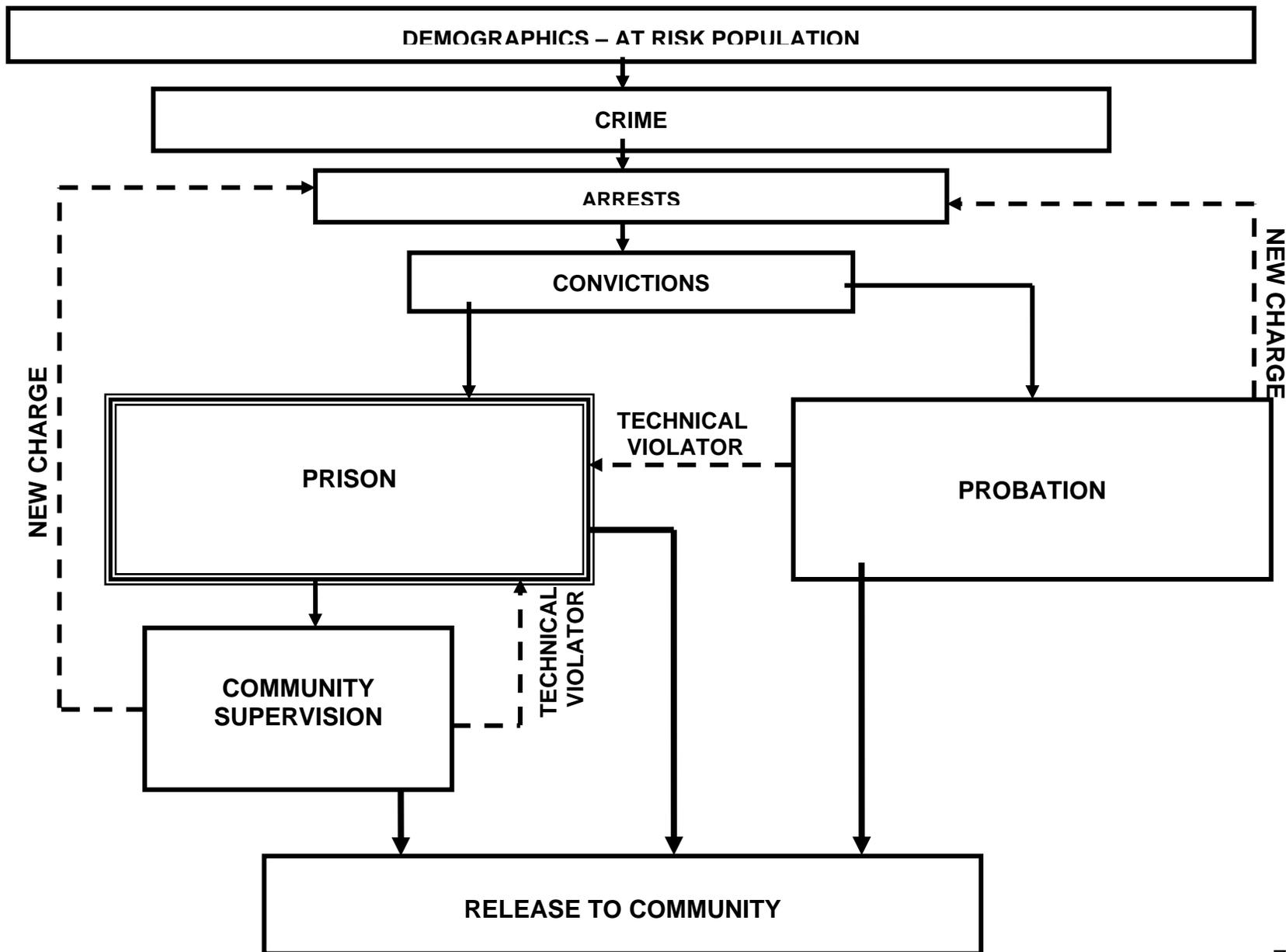
The trends analyzed in this report are built into the simulation model. Historical aggregate admissions, end of year population and releases are blended with the most recent year trends. The MADOC simulation model forecasts by calendar year, 2008 is the most recent year and most accurate data available.

Two main sources of information were used to generate the results presented in this report; extract files and aggregate historical counts. Extract files consist of three case level data files mined from the MADOC database. The three files are: an admission file containing each admission event to the DOC in CY 2008 with corresponding offense and sentencing information, a point-in time file containing each inmate housed by the DOC on May 31, 2009 and a release file containing each release event that occurred in CY 2008.

Aggregate data of historical admissions, releases, and January 1st populations were also provided to JFA and consist of historical summary counts of admissions,

releases and total population. Aggregate data was readily available from MADOC and this report reflects information through 2008. Note: female county cases are included in the admissions, releases and stock populations while male county cases are excluded.

FIGURE 1: SCHEMATIC FLOW OF PRISON POPULATION COMPONENTS



### III. TRENDS IN POPULATION AND CRIME IN MASSACHUSETTS

**Significant Finding:** *The Massachusetts resident population has grown at a moderate pace over the past eight years. From 2000 to 2008, the state's population has increased by 2.1 percent at an annual rate of 0.3 percent.*

**Significant Finding:** *Massachusetts's reported crime index has remained somewhat static over the past eight years, decreasing at an annual rate of only 1.0 percent.*

**Significant Finding:** *Violent crime decreased in Massachusetts by 3.5 percent between 2006 and 2007 from 447.0 violent crimes per 100,000 residents to 431.5 violent crimes per 100,000 residents.*

#### Resident Population

According to the US Census Bureau, between 1990 and 1999, the Massachusetts state population grew at an average annual rate of 0.5 percent. The population in 1990 of 6,022,639 residents grew to 6,317,345 in 1999; this represents a 4.9 percent overall increase.

Since 2000, Massachusetts's population growth has slowed. Over the past eight years, the state's resident population has grown by 2.1 percent overall and by an average of 0.3 percent per year. The Massachusetts Institute for Social and Economic Research (MISER) has projected the resident population of Massachusetts to grow from 6,497,967 in 2008 to 6,557,001 (medium growth projection) in 2010 (an increase of 0.9 percent overall). Further growth projections from the 2008 estimated resident population are listed below in Table 1-B.

The state's at-risk population (the at-risk population is defined as the segment of the overall population historically responsible for the majority of crimes: males ages 15-35) declined in the past eight years by an average annual rate of 0.3 percent.

**TABLE 1-A  
MASSACHUSETTS DEMOGRAPHIC & CRIME TRENDS 2000-2008**

Year	Resident Population	Males Ages 18-35	Violent Crime Index	Property Crime Index	Total Crime Index
2000	6,362,583	1,614,485	476.1	2,550.0	3,026.1
2001	6,407,269	1,605,847	477.8	2,610.1	3,087.9
2002	6,433,043	1,596,691	484.9	2,612.2	3,097.1
2003	6,441,440	1,588,001	473.1	2,562.8	3,035.9
2004	6,437,414	1,576,136	458.8	2,459.7	2,918.5
2005	6,434,343	1,567,785	460.8	2,358.4	2,819.2
2006	6,443,424	1,562,099	447.0	2,391.0	2,838.0
2007	6,467,915	1,564,793	431.5	2,391.5	2,823.0
2008	6,497,967	1,579,445	-	-	-
% Change 2000-2008	2.1%	-2.2%	-9.4%	-6.2%	-6.7%
Avg. % Change 2000-2008	0.3%	-0.3%	-1.4%	-0.9%	-1.0%
% Change 2007-2008	0.5%	0.9%	-3.5%	0.0%	-0.5%

*Source: US Census Bureau, www.fbi.gov*

**TABLE 1-B  
MASSACHUSETTS DEMOGRAPHIC TRENDS 2008-2020**

U Mass Amherst Projection	2008 Estimate	2010 Projection	% Change from 2008 Estimate	2020 Projection	% Change from 2008 Estimate
Medium Projection	6,497,967	6,557,001	0.9%	6,767,712	4.2%
High Projection	6,497,967	6,758,896	4.0%	7,215,706	11.0%

*Source: Massachusetts Institute for Social & Economic Research;  
<http://www.umass.edu/miser/population/miserproj.html>*

Below, the overall population growth between 2000 and 2008 of state's bordering Massachusetts is provided. This table shows Massachusetts' slow population growth is a regional trend and not just limited to the state. Table 2 presents the US Census Bureau estimate for Massachusetts and all neighbor states. The growth rate of 2.1 percent estimated for Massachusetts would make it the 42<sup>nd</sup> fastest growing state in the country if compared to US Census Bureau estimates for other states.

**TABLE 2**  
**TRENDS IN THE POPULATION GROWTH OF MASSACHUSETTS & BORDER STATES 2000-2008**

State	% Growth 2000-2008	Rank Among 50 states
<i>Massachusetts</i>	2.1%	42 <sup>nd</sup>
Connecticut	2.6%	39 <sup>th</sup>
New Hampshire	6.1%	25 <sup>th</sup>
New York	2.6%	40 <sup>th</sup>
Rhode Island	0.0%	49 <sup>th</sup>
Vermont	1.9%	43 <sup>rd</sup>

*Source: US Census Bureau*

## Crime

Note: when crime rates are mentioned in this report they are a reference to reported crime tracked by the FBI's Uniform Crime Reporting (UCR) initiative. Although no statistical significance can be found between crime rates and prison admissions, observing these rates can provide some anecdotal evidence that allows insight into state prison admission trends. Observing historical levels of reported crime can also provide some guidance in projecting future admissions to prison.

During the 1990s, the level of the most serious reported violent and property crimes (defined by the FBI's Uniform Crime Reports Part I Crime category) in Massachusetts decreased at a moderate rate during the first part of the decade and subsequently, decreased significantly during the latter. From 2000-2007, violent crime and property crime continued to decrease in Massachusetts but at levels slower than the highs of the late 1990s.

**TABLE 3  
CHANGES IN THE NUMBER OF UCR CRIMES REPORTED 1990-2007**

<b>Year</b>	<b>Total Reported Crime</b>	<b>Violent Crime</b>	<b>Property Crime</b>
1990 – 1994	-16.2%	-3.9%	-18.2%
1995 – 1999	-24.9%	-19.8%	-25.8%
2000 – 2007	-6.7%	-9.4%	-6.2%

*Source: www.fbi.gov*

Serious crime in Massachusetts has shown a decrease each year since 2002, excepting a marginal increase in 2006. From 2006 to 2007, UCR Part I crime decreased by 0.5 percent. Notably, the last significant increase in crimes reported per 100,000 residents came between 2000 and 2001 (+2.0 percent).

In comparison to its border states, Massachusetts stands at the high rate end of the pack in reference to violent crime and property crimes in 2007 (Table 4).

Unfortunately, JFA does not have access to the numbers of UCR Part II crimes for Massachusetts because they are not tracked by the FBI. As the Part II crime category includes many crimes that can result in prison sentences (especially drug offenses), the absence of these data limits the capacity to use crime data to guide prison admissions projections.

**TABLE 4  
UCR CRIME RATES FOR MASSACHUSETTS & BORDER STATES 2007**

<b>State</b>	<b>Violent Crime Rate</b>	<b>Property Crime Rate</b>
<i>Massachusetts</i>	431.5	2,391.5
Connecticut	256.0	2,399.9
New Hampshire	137.3	1,892.0
New York	414.1	1,978.6
Rhode Island	227.3	2,622.6
Vermont	124.1	2,322.7

*Source: www.fbi.gov*

### **Putting Population and Crime Together: Crime Rates**

The decline in serious crime in the later part of the 1990's occurred as the state population saw only marginal growth. Over the past eight years (2000-2008), trends in crimes per 100,000 residents have continued to decrease at a slower pace in tandem with the slowing of the resident population's growth. More notably, since 2000 the at-risk population has continued to decline in Massachusetts, matching the decline in reported crimes.

## **Comparison of Massachusetts and the United States**

In the discussion above, the population and crime data are observed in terms of changes over time within Massachusetts. In Table 5, JFA presents Massachusetts' population and crime data compared to the national levels and trends. Table 5 makes clear that Massachusetts's resident population over the past ten years has grown at a much slower rate compared to national trends. Since 2000, Massachusetts's population growth (2.1 percent overall) was out-paced by the national population growth of 7.8 percent overall.

In terms of crime rates in 2007, Massachusetts had violent crime rates per 100,000 inhabitants on par with the nation. Massachusetts's violent crime rate (2007, the most recent year this data is available) is only slightly lower than the nation as a whole, 431.5 violent crimes reported per 100,000 residents in Massachusetts compared to 466.9 per 100,000 residents for the whole of the US. Massachusetts property crime rate in 2007 was much lower than the nation as a whole.

In terms of state prison populations, Massachusetts has faster growth than the nation as a whole. Massachusetts' sentenced prison population grew an average of 3.2 percent during the past five years, while the nationwide state prison population grew an average of 1.7 percent per year.

**TABLE 5  
COMPARISON BETWEEN UNITED STATES AND MASSACHUSETTS  
ON KEY POPULATION, CRIME AND CORRECTIONS INDICATORS**

	<b>United States</b>	<b>Massachusetts</b>
<b>POPULATION<sup>3</sup></b>		
Total Population (7/1/08)	304,059,724	6,497,967
Change in Population		
1-year change (7/1/07 – 7/1/08)	0.9%	0.5%
8-year change (7/1/00 – 7/1/08)	7.8%	2.1%
<b>CRIME RATE<sup>4</sup></b> (Rate per 100,000 inhabitants)		
UCR Part I Reported Crime Rates (2007)		
Total	3,730.4	2,823.0
Violent	466.9	431.5
Property	3,263.5	2,391.5
Change in Total Reported Crime Rate		
1-year change (2006-2007)	-2.0%	-0.5%
7-year change (2000-2007)	-9.6%	-6.7%
<b>PRISON POPULATION<sup>5</sup></b>		
Total Inmates (State Prisons Only) 2009	1,409,442*	10,094**
1-year change (2008-2009)	1.0%	1.7%
5-year change (2004-2009)	7.0%	17.1%
Average annual change (2004-2009)	1.7%	3.2%

*\*Mid-year 2008 is the latest count available for the US \*\*MA count is for Jan. 1, 2009*

<sup>3</sup> U.S. Census Bureau. Population estimates for July 1, 2008.

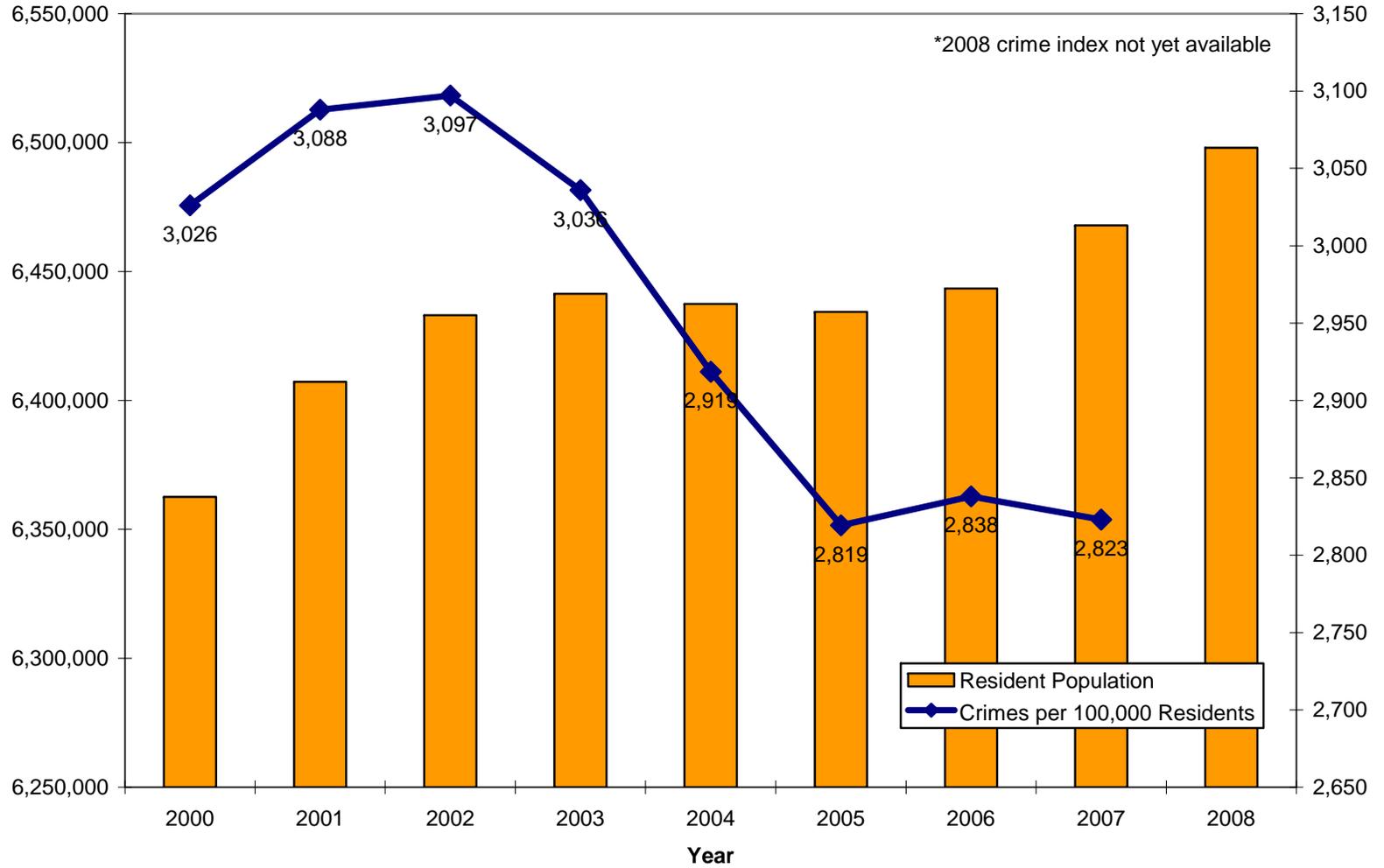
<sup>4</sup> Uniform Crime Reports, Crime in the United States – 2007, Federal Bureau of Investigation.

<sup>5</sup> Prisoners in Mid-Year 2008, Bureau of Justice Statistics Bulletin (March 2009). Count is for all prisoners held in state facilities sentenced to 1 year or more; MA data provided by MADOC.

**Figure 2: Massachusetts Reported Crime vs. Resident Population 2000-2008**

Resident Population

Crimes per 100,000 residents



## IV. CRIMINALLY SENTENCED POPULATION TRENDS

### A. Trends in Admissions

**Significant Finding:** Total sentenced male admissions to prison in 2008 increased by 3.6 percent from 2007 counts while total female sentenced admissions decreased by 5.5 percent. Overall, sentenced admissions to the MADOC grew by only 0.6 percent.

**Significant Finding:** The growth in male admissions over the past five years has outpaced that of females. Female admissions to the Massachusetts Department of Correction increased by an average of 1.9 percent per year since 2004 while male admissions increased by 5.1 percent per annum.

**Significant Finding:** In 2008, the average sentence to prison for all criminally sentenced admissions was 51.9 months with a projected length of stay (LOS) of 38.8 months.

**Significant Finding:** According to MADOC extract files, among male sentenced admissions in 2008, 10.6 percent were parole violators. Among females, parole violators accounted for 8.5 percent of admissions.

Tables 6 and 7 present the male and female admissions to prison from 2004 to 2008. For the purposes of this report it will be assumed that admissions refer to sentenced admissions only. Figure 3 (see appendix) shows the male and female admissions to prison over the five years. Table 8 provides information on the admissions populations for CY 2008.

Note: Aggregate data in tables 6 and 7 do not mimic exactly totals in table 8 (which was created using a MADOC extract file). Aggregate data includes males and females from other jurisdictions (county, federal, other state) housed in the MADOC. These cases, excluding the female county inmates, were removed from the extract file. JFA has determined that the margin of error between the two data sets is negligible. For this initial iteration of the projections, new id-groups were established based on gender, admission type and offense type (most serious offense only; most serious offense is defined as the offense with the longest maximum discharge date).

All tables describing the CY 2008 populations mimic the id-groups used in the simulation model and describe the trends that drive the projections. It is important to note that probation violators are included in new conviction categories in this report. JFA combines probation violators with new convictions because, in essence, a probation violator, like a new conviction from court, is a direct commitment to prison from the judicial side of the justice system and they have similar sentences to new convictions.

## **Admissions – Historical Trends**

- The 11.3 percent increase in male admissions from 2004 to 2005 was the largest increase in the past 5 years. CY 2007 had the second largest increase in admissions with growth of 7.2 percent.
- Since 2004, male admissions to prison have increased with the exception of 2006 when a 17.6 percent decrease in parole revocations fueled a 1.8 percent drop in total male admissions.
- From 2004 to 2008, the average annual change in the number of females admitted to prison was +1.9 percent. CY 2008 saw a dramatic 5.5 percent drop in admission from 2007. This dip was fueled by a sharp dip in new court commitments.
- Overall, the female admissions have grown from 1,150 in 2004 to 1,232 in 2008 or 7.1 percent. The 2008 number is down from the five year high in 2007 of 1,304 total female admissions.
- Like the majority of correctional systems in the nation, the Massachusetts male population drives the trends for the overall prison population. On average over the past eight years males have composed 66.8 percent of all admissions to prison in Massachusetts.

## **Admissions CY 2008**

### **Admissions Counts & Sentencing**

- Using the extract file generated by the MADOC, males accounted for 68.3 percent of admissions in 2008. This differs by less than 1.0 percent from aggregate counts indicating the extract file is an accurate reflection of admissions in 2008.
- Female violent offenders accounted for 5.1 percent respectively of admissions in CY 2008 and averaged a sentence of 22.8 months and an average time to parole eligibility of 12.5 months. Female property offenders accounted for 8.9 percent of admissions and averaged a sentence of 11.1 months. In contrast to national trends, new conviction drug offenders did not account for the majority of total female admissions in 2008 at 20.7 percent. Female drug offense admissions averaged a confinement sentence of 20.9 months and an average wait to parole eligibility of 14.6 months.
- Among male new admissions: drug offenders numbered 789 admissions in CY 2008 (30.5 percent of all male admissions and 20.8 percent of total

admissions) Male drug offenders were the largest crime cohort for 2008 admissions.

- Male parole violators averaged a projected LOS of 20.8 months in 2008 while female parole violators averaged a projected time to release of only 4.9 months.
- Male 'other violent' offenders averaged the longest sentence upon admission in 2008, 123.9 months. This group also averaged the longest projected LOS, 104.5 months. This group is comprised of kidnapping, manslaughter, mayhem, stalking, escape, extortion, intimidation, and vehicular homicide offenders.
- Male sex offender admissions averaged the second longest sentences, 98.5 months. The average projected time to release for this group was 86.4 months. Male sex offenders comprised 5.0 percent of 2008 admissions.
- Male OUI offenses comprised only 1.0 percent of admissions in 2008. This category includes both drug and alcohol driving offenses.
- 'Other non-violent/property' is a catch-all category used by the JFA Institute to group non-violent, low confinement time offenders into one category to be tracked more easily by the simulation model. Examples of crimes in the other non-violent group include arson, contempt of court, and destruction of property. Male other non-violent cases accounted for only 0.9 percent of admissions in 2008.
- The shortest average projected LOS among new conviction males were those convicted of OUI (37.5), burglary/theft/fraud (46.7 months) and drug (49.5 months). Among female admissions, new crime property and other non-violent offenders averaged the lowest average projected length of stays (7.4 and 5.3 months respectively).
- 8.0 percent of 2008 admissions were males convicted of assault. This group averaged a sentence of 67.4 months and a projected LOS of 56.8 months.

**TABLE 6**  
**HISTORICAL CRIMINALLY SENTENCED MALE ADMISSIONS TO PRISON**  
**CY 2004-2008**

Year	New Court Commitments	Return on Probation Violations	Parole Violators	Received from Other Jurisdictions	Escapee Returns	Total
2004	1,802	18	283	143	6	2,252
2005	2,073	14	279	128	12	2,506
2006	2,070	9	230	147	6	2,462
2007	2,238	10	192	196	3	2,639
2008	2,303	5	258	165	3	2,734
% Change 2004-2008	27.8%	-72.2%	-8.8%	15.4%	-	21.4%
Avg. % Change 2004-2008	6.5%	-24.2%	-0.3%	5.5%	-	5.1%
% Change 2007-2008	2.9%	-50.0%	34.4%	-15.8%	-	3.6%

*Source: MADOC*

**TABLE 7  
HISTORICAL CRIMINALLY SENTENCED FEMALE ADMISSIONS TO PRISON  
CY 2004-2008**

Year	New Court Commitments	Return on Probation Violations	Parole Violators	Received from Other Jurisdictions	Escapee Returns	Total
2004	966	49	75	60	0	1,150
2005	1,096	38	96	43	1	1,274
2006	1,083	50	98	53	1	1,285
2007	1,088	45	103	66	2	1,304
2008	1,032	51	99	45	5	1,232
% Change 2004-2008	6.8%	4.1%	32.0%	-25.0%	-	7.1%
Avg. % Change 2004-2008	1.9%	3.1%	7.8%	-3.1%	-	1.9%
% Change 2007-2008	-5.1%	13.3%	-3.9%	-31.8%	-	-5.5%

*Source: MADOC*

**TABLE 8  
CRIMINALLY SENTENCED ADMISSIONS BY OFFENSE CY 2008**

<b>ID-Group</b>	<b>N</b>	<b>%</b>	<b>Avg. Sentence (mos.)</b>	<b>Avg. Proj. Time to Release (mos.)</b>	<b>Avg. Jail Credits (days)</b>	<b>Avg. Time to PE (mos.)</b>
Males	2,589	68.3%	68.9	52.7	262.6	45.0
Assault	304	8.0%	67.4	56.8	270.3	43.2
Sex	190	5.0%	98.5	86.4	243.6	63.1
Robbery	370	9.8%	61.3	50.8	267.0	37.4
Drug	789	20.8%	58.4	49.5	216.2	40.8
Burglary/Theft/Fraud	207	5.5%	55.7	46.7	192.5	35.4
OUI	38	1.0%	45.1	37.5	176.8	28.3
Weapons	159	4.2%	67.1	55.0	302.6	44.3
Other non-violent/property	34	0.9%	66.1	56.6	207.4	42.6
Other violent	127	3.4%	123.9	104.5	476.0	81.6
Lifer	90	2.4%	Life	-	667.3	103.9
Parole Violator	274	7.2%	90.8	20.8	220.5	9.5
Undetermined	7	0.2%	-	-	-	-
Females	1,201	31.7%	15.5	10.1	52.7	8.6
Violent	194	5.1%	22.8	16.8	88.2	12.5
Drug	249	6.6%	20.9	16.6	62.5	14.6
Property	339	8.9%	11.1	7.4	39.0	5.0
Other non-violent	316	8.3%	9.2	5.3	27.5	4.0
Lifer	1	0.0%	-	-	-	-
Parole Violator	102	2.7%	22.1	4.9	76.7	8.6
Total	3,790	100.0%	51.9	38.8	195.9	35.0

Source: MADOC extract files;

Note: Undetermined signifies cases where most serious offense could not be determined

## B. Trends in the Criminally Sentenced Inmate Population

**Significant Finding:** *The Massachusetts sentenced prison population has grown from 8,621 inmates in 2004 to 10,094 inmates on the first day of 2009, an increase of 17.1 percent overall.*

**Significant Finding:** *The female inmate population decreased by 2.5 percent between 2008 and 2009.*

**Significant Finding:** *The MADOC sentenced population on May 31, 2009 averaged an adjusted projected time to release of 54.0 months.*

Table 9 presents the January 1st inmate populations for male and female criminally sentenced inmates from 2004 to 2009. Table 10 details the criminally sentenced population on May 31, 2009 for males and females by offense.

- The male prison population has increased by 1,425 offenders from Jan. 1, 2004 to Jan. 1, 2009 with an average increase of 3.3 percent per year. In 2008, the male inmate population grew by 179 offenders, or 1.9 percent. Growth in the male population has driven the increase in the overall population since Jan. 1, 2004.
- The pace of the growth in the female prison population has not exceeded that of the males over the past five years, in contrast to national trends. The female prison population increased by 48 between Jan. 1, 2004 and Jan. 1, 2009 – a total increase of 8.9 percent with an average increase of only 1.8 percent per year. In 2008, the female sentenced population decreased by 15 offenders, or 2.5 percent.
- Females made up 5.9 percent of the state prison population on the first day of 2009. In the past five years, the percentage of the prison population that is female has remained static averaging 6.3 percent.
- The total prison population grew at a moderate rate over the entire 2004-2009 timeframe. The most significant increase came between Jan. 1, 2005 and Jan. 1, 2006 when the population grew 5.2 percent.

### MAY 31, 2009 SNAPSHOT POPULATION

- Overall, sentence lengths in the Massachusetts admissions cohort for CY 2008 were slightly lower than the sentence lengths for the point-in-time, or snapshot, cohort taken on May 31, 2009. This is an indication of a stacking effect in the Massachusetts prison population. Stacking occurs as inmates enter prison with confinement times that are excessively long; overtime, as more offenders enter

with long sentence lengths, fewer exit having to serve out their extended prison terms.

- The average adjusted sentences (time left to serve on a sentence term) for males serving prison time ranged from 116.8 months (or 9.7 years) for sex offenders to 30.5 months for OUI offenders.
- Males held in the MADOC on the snapshot day averaged an adjusted projected time to release of 56.0 months. Females averaged an adjusted projected time to release of 24.6 months.
- Male new crime drug offenders, which accounted for 23.7 percent of the sentenced point-in-time population, averaged an adjusted sentence of 45.9 months and an adjusted projected time to release of 36.4 months. Female new crime drug offenders averaged an adjusted sentence of 32.8 months and a projected time to release of 26.6 months.
- Male lifers comprised 16.8 percent of the prison population on May 31, 2009.
- Male new crime sex offenders comprised 11.3 percent of the point-in-time population. This group averaged an adjusted projected time to release of 98.5 months.
- Male new crime robbery offenders comprised 11.7 percent of the prison population and averaged an adjusted projected LOS of 50.0 months.
- Male violent offenders (assault, sex, robbery and other violent) comprised 38.8 percent of the snap shot prison population.
- Female violent offenders made up 26.5 percent of the snapshot female prison population, drug offenders comprised 29.4 percent and property offenders made up 20.3 percent. These groups averaged an adjusted projected LOS of 39.6 months, 26.6 months and 12.0 months respectively.
- Male parole revocations comprised only 2.3 percent of the snapshot prison population and averaged an adjusted projected LOS of 36.7 months. Female parole violators in the snapshot numbered only 20 and averaged an adjusted projected LOS of only 4.4 months.

**TABLE 9  
HISTORICAL CRIMINALLY SENTENCED INMATE POPULATION  
BEGINNING OF THE YEAR  
2004-2009**

Year	Sentenced Males	Sentenced Females	Total
2004	8,082	539	8,621
2005	8,042	578	8,620
2006	8,482	590	9,072
2007	8,900	624	9,524
2008	9,328	602	9,930
2009	9,507	587	10,094
% Change 2004-2009	17.6%	8.9%	17.1%
Avg. % Change 2004-2009	3.3%	1.8%	3.2%
% Change 2008-2009	1.9%	-2.5%	1.7%

Source: MADOC

**TABLE 10  
CRIMINALLY SENTENCED PRISON POPULATION MAY 31, 2009**

<b>ID-Group</b>	<b>N</b>	<b>%</b>	<b>Avg. Adjusted Sentence (mos.)</b>	<b>Avg. Adjusted Proj. Time to Release (mos.)</b>
Males	9,820	94.1%	60.8	56.0
Assault	997	9.6%	76.7	62.1
Sex	1,182	11.3%	116.8	98.5
Robbery	1,216	11.7%	62.9	50.0
Drug	2,473	23.7%	45.9	36.4
Burglary/Theft/Fraud	621	6.0%	54.9	44.5
OUI	97	0.9%	30.5	22.4
Weapons	478	4.6%	55.7	43.8
Other non-violent/property	105	1.0%	66.0	53.7
Other violent	651	6.2%	107.7	85.6
Lifer	1,748	16.8%	Life	-
Parole Violator	241	2.3%	117.0	36.7
Undetermined	11	0.1%	-	-
Females	612	5.9%	30.7	24.6
Violent	162	1.6%	53.1	39.6
Drug	180	1.7%	32.8	26.6
Property	124	1.2%	16.7	12.0
Other non-violent	69	0.7%	12.0	13.5
Lifer	44	0.4%	17.6	11.1
Parole Violator	20	0.2%	21.9	4.4
Undetermined	13	0.1%	-	-
<b>Total</b>	<b>10,432</b>	<b>100.0%</b>	<b>59.1</b>	<b>54.0</b>

*Source: MADOC extract files;*

*Note: Undetermined signifies cases where most serious offense could not be determined*

### C. Trends in Releases from Prison

**Significant Finding:** *The average length of stay (LOS) for all 3,580 releases from the MADOC 2008 release extract file was 30.6 months. .*

**Significant Finding:** *According to the 2008 release extract file, 63.7 percent of releases were GCD/EXP/REL (good conduct release or expiration of sentence) and 29.9 percent were releases to parole supervision.*

**Significant Finding:** *Male releases in 2008 served an average of 59.4 percent of their total confinement sentence; females served an average of 47.7 percent of their total confinement sentence.*

Tables 11 and 12 present historical releases since 2004 by gender. Table 13 provides release information by offense and gender for CY 2008 using data drawn from the MADOC release extract file. Note: Aggregate data in tables 11 and 12 do not mimic exactly totals in table 13 (which was created using a MADOC extract file). As noted previously this is due to the presence of county male or male/female out of state/federal cases in the aggregate data. JFA has determined that the margin of error between the two data sets is negligible.

- Total male releases increased by 13.1 percent in CY 2008. This outpaced the 3.6 percent increase in admissions. Male releases have increased by an average of 2.2 percent per annum since 2004. As mentioned previously in this report male admissions have increased to the MADOC by an average of 5.1 percent every year since 2004.
- Male parole releases have increased by an average of 2.5 percent since 2004, outpacing expiration releases which have increased by 2.0 percent per year. Female parole releases have increased by an average of only 0.7 percent per year while expiration releases have increased by 5.4 percent per year.
- 1.6 percent of releases in 2008 were male lifers. This group averaged a LOS of 162.1 months (13.5 years). Most of these inmates were released to parole supervision or died in prison.
- Male parole violators accounted for 7.5 percent of releases in 2008 and averaged a LOS of 13.0 months. This length of stay is on par with national averages for parole revocations.
- Excluding lifers, male sex offenders released in 2008 averaged the longest prison stay among the offense groups. This release group averaged a LOS of 90.5 months and served an average of 75.6 percent of their original sentence.

- Among female releases, excluding lifers, violent offenders averaged the longest prison stay, 10.9 months, and served an average of 49.8 percent of their original sentence.
- While male OUI offenders comprised a small portion of admissions and releases, this group served, on average, a high percentage of their original sentence among 2008 releases, 73.5 percent.
- Male burglary/theft/fraud offenders averaged a LOS of 33.3 months upon release in 2008 and served an average of 62.6 percent of their sentence.
- Male drug offenders averaged a LOS of 38.9 months and served an average of 67.8 percent of their sentence. Male drug offenders were the largest offense group among 2008 releases (19.7 percent of all 3,580 releases).

**TABLE 11  
HISTORICAL CRIMINALLY SENTENCED MALE RELEASES  
CY 2004-2008**

Year	Expiration of Sentence	Court Releases	Paroles	Releases to Other Jurisdictions	Escapes from Confinement	Other Releases	Total
2004	1,427	45	734	142	5	21	2,374
2005	1,298	38	620	101	9	28	2,094
2006	1,373	41	569	143	6	30	2,162
2007	1,359	40	629	190	5	35	2,258
2008	1,524	37	776	184	3	29	2,553
% Change 2004-2008	6.8%	-17.8%	5.7%	29.6%	-40.0%	38.1%	7.5%
Avg. % Change 2004-2008	2.0%	-4.4%	2.5%	10.6%	-2.5%	10.0%	2.2%
% Change 2007-2008	12.1%	-7.5%	23.4%	-3.2%	-40.0%	-17.1%	13.1%

*Source: MADOC*

**TABLE 12**  
**HISTORICAL CRIMINALLY SENTENCED FEMALE RELEASES**  
**CY 2004-2008**

Year	Expiration of Sentence	Court Releases	Paroles	Releases to Other Jurisdictions	Escapes from Confinement	Other Releases	Total
2004	644	26	297	160	0	0	1,127
2005	775	25	306	152	0	3	1,261
2006	742	26	319	159	1	0	1,247
2007	775	29	335	188	1	1	1,329
2008	782	17	303	137	4	0	1,243
% Change 2004-2008	21.4%	-34.6%	2.0%	-14.4%	-	-	10.3%
Avg. % Change 2004-2008	5.4%	-7.4%	0.7%	-2.3%	-	-	2.7%
% Change 2007-2008	0.9%	-41.4%	-9.6%	-27.1%	-	-	-6.5%

*Source: MADOC*

**TABLE 13  
CRININALLY SENTENCED RELEASES IN CY 2008 BY OFFENSE**

ID-Group	N	%	Avg. Length of Stay (mos.)	% Sentence Served	Release Type		
					GCD/EXP/REL	Parole	Other
Males	2,339	65.3%	43.6	59.4%	64.3%	32.8%	2.9%
Assault	282	7.9%	45.4	63.0%	61.7%	36.5%	1.8%
Sex	189	5.3%	90.5	75.6%	88.4%	4.8%	6.9%
Robbery	385	10.8%	39.8	63.6%	58.4%	39.7%	1.8%
Drug	704	19.7%	38.9	67.8%	63.9%	34.7%	1.4%
Burglary/Theft/Fraud	175	4.9%	33.3	62.6%	62.3%	37.1%	0.6%
OUI	30	0.8%	31.4	73.5%	86.7%	13.3%	0.0%
Weapons	115	3.2%	32.1	65.3%	74.8%	22.6%	2.6%
Other non-violent/property	41	1.1%	31.2	62.6%	63.4%	36.6%	0.0%
Other violent	89	2.5%	51.8	58.9%	59.6%	36.0%	4.5%
Lifer	59	1.6%	162.1	-	1.7%	71.2%	27.1%
Parole Violator	269	7.5%	13.0	12.8%	69.1%	27.5%	3.3%
Undetermined	1	0.0%	-	-	-	-	-
Females	1,241	34.7%	6.0	47.7%	62.5%	24.3%	13.1%
Violent	206	5.8%	10.9	49.8%	62.6%	31.1%	6.3%
Drug	255	7.1%	9.3	52.1%	57.6%	29.4%	12.9%
Property	331	9.2%	4.3	50.5%	60.1%	27.8%	12.1%
Other non-violent	337	9.4%	3.1	50.2%	64.7%	17.8%	17.5%
Lifer	1	0.0%	-	-	0.0%	100.0%	0.0%
Parole Violator	105	2.9%	2.7	15.9%	78.1%	9.5%	12.4%
Undetermined	6	0.2%	-	-	-	-	-
Total	3,580	100.0%	30.6	55.4%	63.7%	29.9%	6.5%

Source: MADOC extract files;

Note: Undetermined signifies cases where most serious offense could not be determined

## D. Trends in Parole Grant Rates 2008

The MADOC requested the Massachusetts parole board to provide an extract file detailing parole hearings for 2008. This extract file was provided to JFA and contained all the necessary data needed by JFA excepting most serious offense. JFA attempted to match the parole hearing cases in the extract file to the extract file cases in the prison admission, stock and release files. This match was only 80 percent successful. This left too large a margin of error for JFA to consider the parole hearing data useful for the simulation model. Further, time constraints made it impossible for a new parole hearing file to be generated in time for the generation of the prison population forecast.

To compensate for the absence of the grant rate file data, JFA employed the percentage of sentenced served for the 2008 release cohort as an estimation of time to release for parolees. Further, the MADOC provided the 2008 Massachusetts Parole Board Statistical Report which detailed the overall grant rate for state hearings and county hearings.

In 2008, the Massachusetts Parole Board conducted 8,810 institutional release hearings for state and county inmates. As a result of these hearings, 5,741 inmates were either paroled and placed under the supervision of field parole officers in the eight parole regions across the Commonwealth or paroled to custody, that is, paroled administratively to serve another state or federal sentence or to some other type of outstanding process. This produced a parole rate of 65 percent during the year (2008).<sup>6</sup>

The 65 percent grant rate reported by the parole board is in contrast with the 41 percent grant rate determined from the MDOC extract files. This difference is fairly substantial and requires further review by MDOC staffers before a final grant rate can be decided upon and assumed in any forecast.

Table 14 details these rates further.

**TABLE 14  
GRANT RATES 2008**

<b>Release Hearings</b>	<b># Hearings</b>	<b>Granted</b>	<b>Grant Rate</b>
State	1,753	1,077	61%
County	7,057	4,664	66%
Total	8,810	5,741	65%
Lifer Hearings	108	29	27%

*\*Note: MDOC reports grant rate of 41%*

<sup>6</sup> Massachusetts Parole Board 2008 Annual Statistical Report pg. 13

## **V. KEY CRIMINALLY SENTENCED POPULATION PROJECTION ASSUMPTIONS**

The key three “drivers” of the MADOC prison population will be the number of prisoners sentenced by the courts, the types of crimes they have been sentenced for, and the length of the confinement times imposed by type of crime.

Currently, the number of new admissions per year is somewhat unstable in Massachusetts. While new sentence admissions (not including probation violators) increased in 2008 by less than 1.0 percent, in the previous twelve months this admission cohort saw an increase of 5.0 percent. At this time, it is very uncertain if the rate of 2008 will continue or if the large increases of 2007 will appear again.

- **The composition of future new court commitments is assumed to be the same as the composition of admissions during the time period January 1, 2008 to December 31, 2008.**

Projections in this report are based on admission and release data provided to the JFA Institute by the Massachusetts Department of Correction for the time period January 1, 2008 to December 31, 2008 as well as monthly counts through July 2009. Future admissions over the next ten years are assumed to “look like” these admissions in terms of the proportion of admitting charges, confinement times received and serving times to release eligibility. Jail credit days earned and good time credit awards are also assumed to mimic 2008 averages. Summaries of these admissions characteristics are provided in the body of this briefing document.

- **Revocation and return to prison rates will remain at the levels reported in CY 2008.**

According to the MADOC aggregate counts, during 2008 84.1 percent of admissions in CY 2008 were new commitments, 1.4 percent probation violators, and 9.0 percent were parole supervision revocations with or without a new sentence. It is assumed these rates will remain constant over the forecast period.

## **E. CRIMINALLY SENTENCED POPULATION PROJECTIONS**

This section contains the sentenced inmate population projections based on the assumptions set forth above. These numbers were independently derived by JFA with no knowledge of current capacity or prior projections. This allows JFA to produce an independent forecast with no outside influence. Projections are presented for male and female inmates and the total inmate population.

Table 15 presents the summary table of male, female and total population historical and projections from 2004 to 2019. More detailed projections tables are in the appendix of this document.

### **CRIMINALLY SENTENCED PROJECTIONS AT A GLANCE**

- On January 1, 2009 the total MADOC sentenced inmate population was 10,094. This population is projected to grow to 10,476 by year-end 2009 (growth of 3.8 percent). The total sentenced inmate population is projected to be 11,966 in 2014 and 13,420 in 2019. The JFA simulation model projects the total inmate population to grow 28.1 percent at an average annual rate of 2.5 percent between year-end 2009 and year-end 2019.
- The male sentenced inmate population is projected to grow at an average annual rate of 2.5 percent between year-end 2009 and year-end 2019. The female sentenced inmate population is projected to grow by an average annual rate of 2.8 percent.
- County female projections are included at the request of the MADOC. County females represent females held by the MADOC under agreement with commonwealth counties to house inmates at the cost of the MADOC. This group is a subset of the total female forecast and the total inmate forecast. This group is forecasted to grow from 291 at year-end 2009 to 339 at year-end 2019 at an average annual increase of 1.6 percent.

**TABLE 15  
HISTORICAL & PROJECTED CRIMINALLY SENTENCED POPULATIONS**

Year	Historical Beginning of Year			Projected End of Year		
	Males	Females	Total	Males	Females	Total
2004	8,082	539	8,621			
2005	8,042	578	8,620			
2006	8,482	590	9,072			
2007	8,900	624	9,524			
2008	9,328	602	9,930			
2009	9,507	587	10,094	9,864	612 (291*)	10,476
2010				10,083	635 (312*)	10,718
2011				10,386	644 (294*)	11,030
2012				10,727	662 (306*)	11,389
2013				10,985	689 (305*)	11,674
2014				11,260	706 (293*)	11,966
2015				11,516	725 (321*)	12,241
2016				11,741	742 (316*)	12,483
2017				12,070	767 (324*)	12,837
2018				12,353	771 (321*)	13,124
2019				12,617	803 (339*)	13,420
Numerical Change 2004-2009	1,425	48	1,473			
% Change 2004-2009	17.6%	8.9%	17.1%			
Avg. % Change 2004-2009	3.3%	1.8%	3.2%			
Numerical Change 2009-2019				2,753	191 (48*)	2,944
% Change 2009-2019				27.9%	31.2% (16.5%*)	28.1%
Avg. % Change 2009-2019				2.5%	2.8% (1.6%*)	2.5%

Source: JFA Simulation Model \*Note: County female forecast

## VI. AWAITING TRIAL & CIVIL COMMITMENT PROJECTIONS

### Awaiting trial

This section provides the assumptions and trends used to produce the awaiting trial and civil commitment projections. Table 16 provides the average historical awaiting trial population by gender for 2006 through 2009. The average male awaiting trial population has decreased by an average of 6.0 percent per annum between 2006 and 2009. For the first six months of 2009, the male awaiting trial population averaged 334.6 persons per month while the female awaiting trial population averaged 171.9 per month.

Also included in Table 16 is the annual peaking factor. Peaking factor is calculated by taking the highest population of the year and determining its percentage of the yearly average. When projecting populations that fluctuate significantly over the year, the peaking factor is built into forecasts so that the institutions can plan accordingly.

Table 17 details the average length of stay for awaiting trial releases in 2008. Males released after sentencing averaged the longest LOS, 256.5 days. Female cases transferred out of the system averaged a LOS of 70.3 days (the longest among female release types). This information was generated from a release extract file produced by the MADOC.

Table 19 provides JFA's projections for the awaiting trial population. It is assumed that awaiting trial admissions will increase at the same rate as the criminally sentenced population. The average awaiting trial population is projected to increase by an annual average change of 2.2 percent from 572 in 2009 to 713 in 2019.

**TABLE 16  
HISTORICAL AVERAGE AWAITING TRIAL POPULATION 2004-2009**

Year	Males		Females	
	Average	Peaking Factor	Average	Peaking Factor
2004	458.3	8.9%	180.1	14.9%
2005	441.0	22.7%	180.5	13.6%
2006	448.7	16.3%	197.0	9.1%
2007	396.2	9.0%	209.9	10.0%
2008	372.5	9.0%	192.4	13.8%
2009*	334.6	8.2%	171.9	12.3%
Average % Change	-6.0%	-	-0.6%	-

Source: MADOC \*Partial year data

**TABLE 17  
LENGTH OF STAY BY AWAITING TRIAL RELEASE TYPE 2008**

<b>Awaiting trial Release Type</b>	<b>Male Avg. LOS (days)</b>	<b>Female Avg. LOS (days)</b>
Sentenced	256.5	60.2
Transfer	92.3	70.3
Other	62.6	48.7

*Source: MADOC*

**TABLE 18  
AWAITING TRIAL PROJECTIONS**

<b>Year</b>	<b>Males</b>		<b>Females</b>		<b>Total</b>	
	<b>Yearly Avg.</b>	<b>Peaking Factor</b>	<b>Yearly Avg.</b>	<b>Peaking Factor</b>	<b>Yearly Avg.</b>	<b>Peaking Factor</b>
2009	363	396	156	176	519	572
2010	370	404	165	186	535	590
2011	386	420	165	190	551	610
2012	391	426	174	196	565	622
2013	397	432	181	204	578	636
2014	400	436	184	208	584	644
2015	403	439	194	219	597	658
2016	404	440	197	223	601	663
2017	410	447	198	223	608	670
2018	428	467	198	223	626	690
2019	445	486	201	227	646	713
Average % Change	2.1%	2.1%	2.6%	2.6%	2.2%	2.2%

## Civil Commitments

Civil commitments in Massachusetts are court ordered placements to DOC supervision. These cases are usually mental health evaluations, substance addicts or sexually dangerous cases. There is no way to predict the number of court referrals in the future. The civil commitment projection is based on average annual changes in the past.

Since 2006, the average civil commitment population has declined by an annual average of 6.1 percent. This has been fueled by the decreasing civil population housed in the MASAC. According to MADOC stake holders, this population has decreased due to two factors. First, Men’s Addiction Treatment Center at Brockton opened and began taking transfers from MASAC. Second, in April 2009, 100 of the MASAC beds were converted to minimum beds for criminally sentenced offenders.

Female substance addiction commitments have also decreased with the diversion of some women to the Women’s Addiction Center in New Bedford, MA. This community facility opened in 2006.

Table 21 presents JFA’s forecast for the civil commitment population by facility. Table 22 adds a peaking factor to account for season fluctuations and to assist policy makers in anticipating the effect of population spikes on future bed space needs.

**TABLE 19  
HISTORICAL AVERAGE CIVIL COMMITMENT POPULATION BY FACILITY  
2006-2009**

<b>Year</b>	<b>Framingham (Females) Avg.</b>	<b>MASAC Avg.</b>	<b>BSH Avg.</b>	<b>MTC Avg.</b>	<b>Other Facility Avg.</b>	<b>Total Average.</b>
2006	17	208	243	285	6	758.2
2007	13	182	216	297	6	714.1
2008	9	166	244	281	5	703.8
2009*	10	103	219	292	5	628.9
Average Percent Change	56.5%	-19.5%	-3.2%	1.1%	-6.7%	-6.1%

**TABLE 20  
HISTORICAL CIVIL COMMITMENT PEAKING FACTOR BY FACILITY**

<b>Year</b>	<b>Framingham (Females)</b>	<b>MASAC</b>	<b>BSH</b>	<b>MTC</b>	<b>Other Facility</b>	<b>Total</b>
2006	19	197	251	282	5	754
2007	9	144	202	302	4	661
2008	2	97	229	291	4	623
2009*	8	98	221	291	4	622
Average Percent Change	56.5%	-19.5%	-3.2%	1.1%	-6.7%	-6.1%

**TABLE 21  
CIVIL COMMITMENT PROJECTIONS**

<b>Year</b>	<b>Framingham (Females)</b>	<b>MASAC</b>	<b>BSH</b>	<b>MTC</b>	<b>Other Facility</b>	<b>Total</b>
2009	10	103	220	296	5	634
2010	10	104	221	299	5	639
2011	11	104	222	302	5	644
2012	11	105	223	306	5	650
2013	11	105	225	309	5	655
2014	11	106	226	312	5	660
2015	11	106	227	316	5	665
2016	11	107	228	319	5	670
2017	12	107	229	323	5	676
2018	12	108	230	326	5	681
2019	12	109	231	330	5	687
Avg. % Change	1.9%	0.6%	0.5%	1.1%	0.0%	0.8%

**TABLE 22  
CIVIL COMMITMENT PROJECTIONS WITH PEAKING FACTOR**

<b>Year</b>	<b>Framingham (Females)</b>	<b>MASAC</b>	<b>BSH</b>	<b>MTC</b>	<b>Other Facility</b>	<b>Total</b>
2009	15	120	236	306	7	684
2010	15	120	237	309	7	688
2011	15	121	239	313	7	695
2012	16	121	240	316	7	700
2013	16	122	241	320	7	706
2014	16	123	242	323	8	712
2015	16	123	243	327	8	717
2016	16	124	245	330	8	723
2017	17	125	246	334	8	730
2018	17	125	247	338	8	735
2019	17	126	248	341	8	740
Avg. % Change	1.3%	0.5%	0.5%	1.1%	1.4%	0.8%

## **APPENDIX: DEFINITIONS, ADDITIONAL TABLES & FIGURES**

## DEFINITIONS

Adjusted projected time to release (months) = projected time to release – length of stay so far

Adjusted Sentence (months) = maximum sentence length – length of stay so far

Length of stay (months) = [release date – admission date]/30 days

Length of stay so far (months) = [current date (today) – admission date]/30 days

- Today = May 31, 2009

Maximum Sentence (months) = maximum sentence length/30 days

Percentage of sentence served = (maximum sentence /length of stay) \* 100

Peaking Factor is calculated by taking the highest population of the year and determining its percentage of the yearly average.

Projected time to release (months) = [projected release date) – admission date]/30 days

Time to parole eligibility (months) = [parole eligibility date– admission date]/ 30 days

**TABLE A  
TOTAL CRIMINALLY SENTENCED PROJECTIONS BY MONTH**

Year	Total Male and Female Population												Yearly Average
	January	February	March	April	May	June	July	August	September	October	November	December	
<b>Actual 2009</b>	<b>10,294</b>	<b>10,332</b>	<b>10,335</b>	<b>10,365</b>	<b>10,350</b>	<b>10,361</b>							
<b>2009</b>	10,291	10,307	10,317	10,336	10,355	10,365	10,371	10,377	10,408	10,419	10,413	10,476	<b>10,370</b>
<b>2010</b>	10,497	10,530	10,540	10,580	10,611	10,607	10,654	10,660	10,681	10,695	10,715	10,718	<b>10,624</b>
<b>2011</b>	10,717	10,747	10,806	10,835	10,860	10,848	10,902	10,926	10,920	10,965	10,982	11,030	<b>10,878</b>
<b>2012</b>	11,067	11,066	11,149	11,175	11,162	11,171	11,240	11,253	11,289	11,322	11,336	11,389	<b>11,218</b>
<b>2013</b>	11,436	11,484	11,503	11,522	11,551	11,574	11,588	11,583	11,611	11,628	11,630	11,674	<b>11,565</b>
<b>2014</b>	11,737	11,786	11,825	11,815	11,832	11,843	11,865	11,885	11,914	11,935	11,954	11,966	<b>11,863</b>
<b>2015</b>	12,003	11,990	12,007	12,032	12,049	12,086	12,122	12,103	12,154	12,191	12,210	12,241	<b>12,099</b>
<b>2016</b>	12,268	12,267	12,264	12,285	12,325	12,339	12,360	12,272	12,385	12,390	12,424	12,483	<b>12,339</b>
<b>2017</b>	12,495	12,545	12,590	12,621	12,615	12,661	12,697	12,716	12,739	12,774	12,800	12,837	<b>12,674</b>
<b>2018</b>	12,860	12,866	12,903	12,926	12,934	12,975	13,024	13,052	13,040	13,086	13,097	13,124	<b>12,991</b>
<b>2019</b>	13,168	13,190	13,198	13,231	13,247	13,274	13,279	13,300	13,333	13,339	13,364	13,420	<b>13,279</b>

*Source: JFA Simulation Model*

**TABLE B  
MALE CRIMINALLY SENTENCED PROJECTIONS BY MONTH**

Year	Total Male Population												Yearly Average
	January	February	March	April	May	June	July	August	September	October	November	December	
<b>Actual 2009</b>	<b>9,689</b>	<b>9,723</b>	<b>9,744</b>	<b>9,754</b>	<b>9,743</b>	<b>9,760</b>							
<b>2009</b>	9,695	9,716	9,722	9,735	9,749	9,757	9,761	9,765	9,789	9,809	9,804	9,864	<b>9,764</b>
<b>2010</b>	9,892	9,916	9,927	9,958	9,982	9,979	10,017	10,020	10,046	10,061	10,084	10,083	<b>9,997</b>
<b>2011</b>	10,083	10,111	10,154	10,166	10,194	10,209	10,242	10,269	10,284	10,316	10,346	10,386	<b>10,230</b>
<b>2012</b>	10,426	10,425	10,490	10,515	10,506	10,519	10,576	10,592	10,619	10,648	10,671	10,727	<b>10,560</b>
<b>2013</b>	10,775	10,814	10,824	10,851	10,876	10,900	10,909	10,901	10,931	10,937	10,943	10,985	<b>10,887</b>
<b>2014</b>	11,026	11,072	11,109	11,112	11,123	11,144	11,160	11,175	11,208	11,227	11,251	11,260	<b>11,156</b>
<b>2015</b>	11,300	11,287	11,312	11,331	11,343	11,372	11,412	11,384	11,436	11,476	11,488	11,516	<b>11,388</b>
<b>2016</b>	11,542	11,536	11,539	11,551	11,586	11,611	11,628	11,542	11,655	11,653	11,678	11,741	<b>11,605</b>
<b>2017</b>	11,753	11,814	11,850	11,882	11,886	11,918	11,950	11,966	11,984	12,015	12,036	12,070	<b>11,927</b>
<b>2018</b>	12,090	12,096	12,131	12,157	12,171	12,213	12,258	12,288	12,284	12,323	12,337	12,353	<b>12,225</b>
<b>2019</b>	12,392	12,411	12,418	12,455	12,473	12,496	12,497	12,511	12,544	12,547	12,571	12,617	<b>12,494</b>

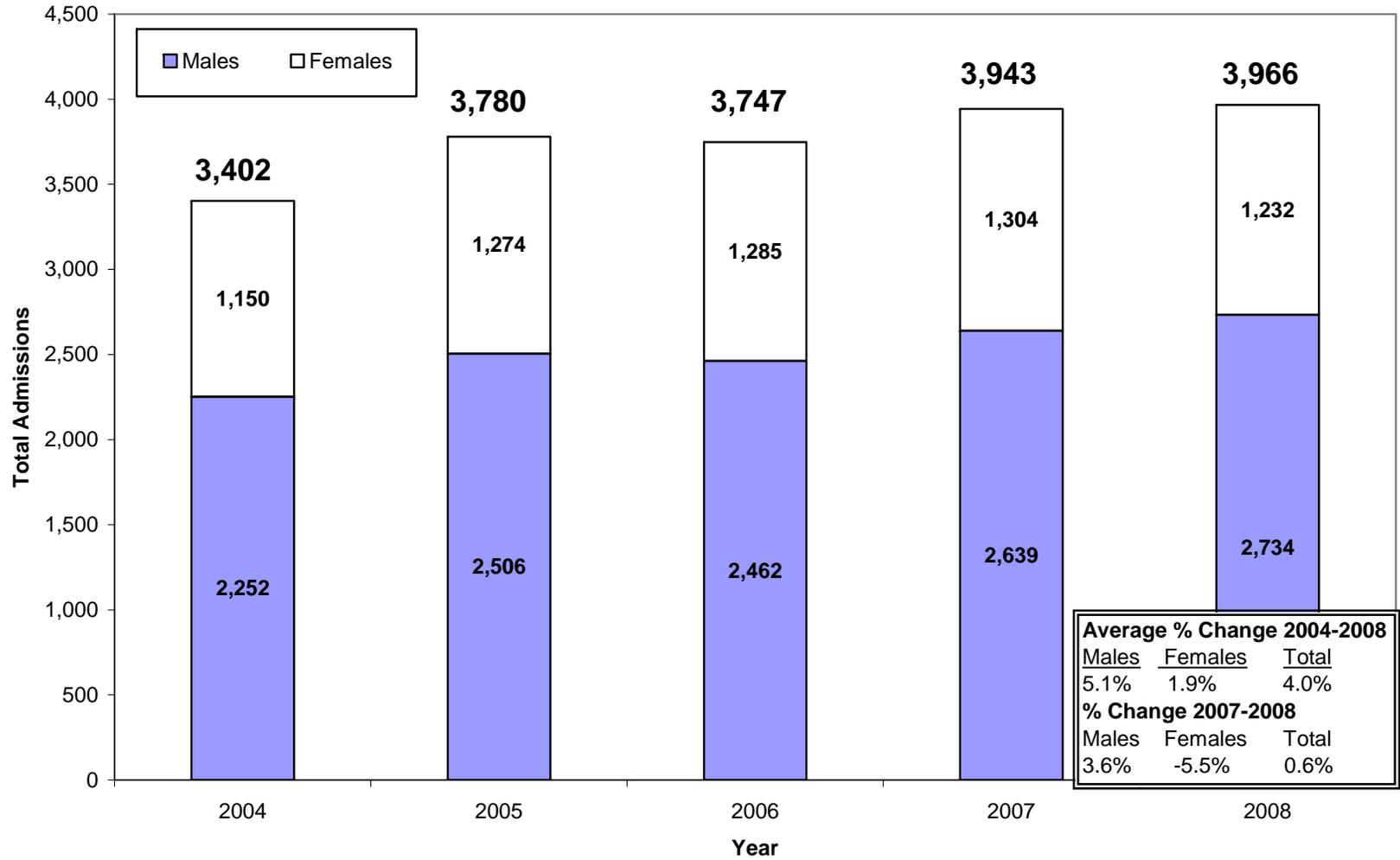
*Source: JFA Simulation Model*

**TABLE C  
FEMALE CRIMINALLY SENTENCED PROJECTIONS BY MONTH**

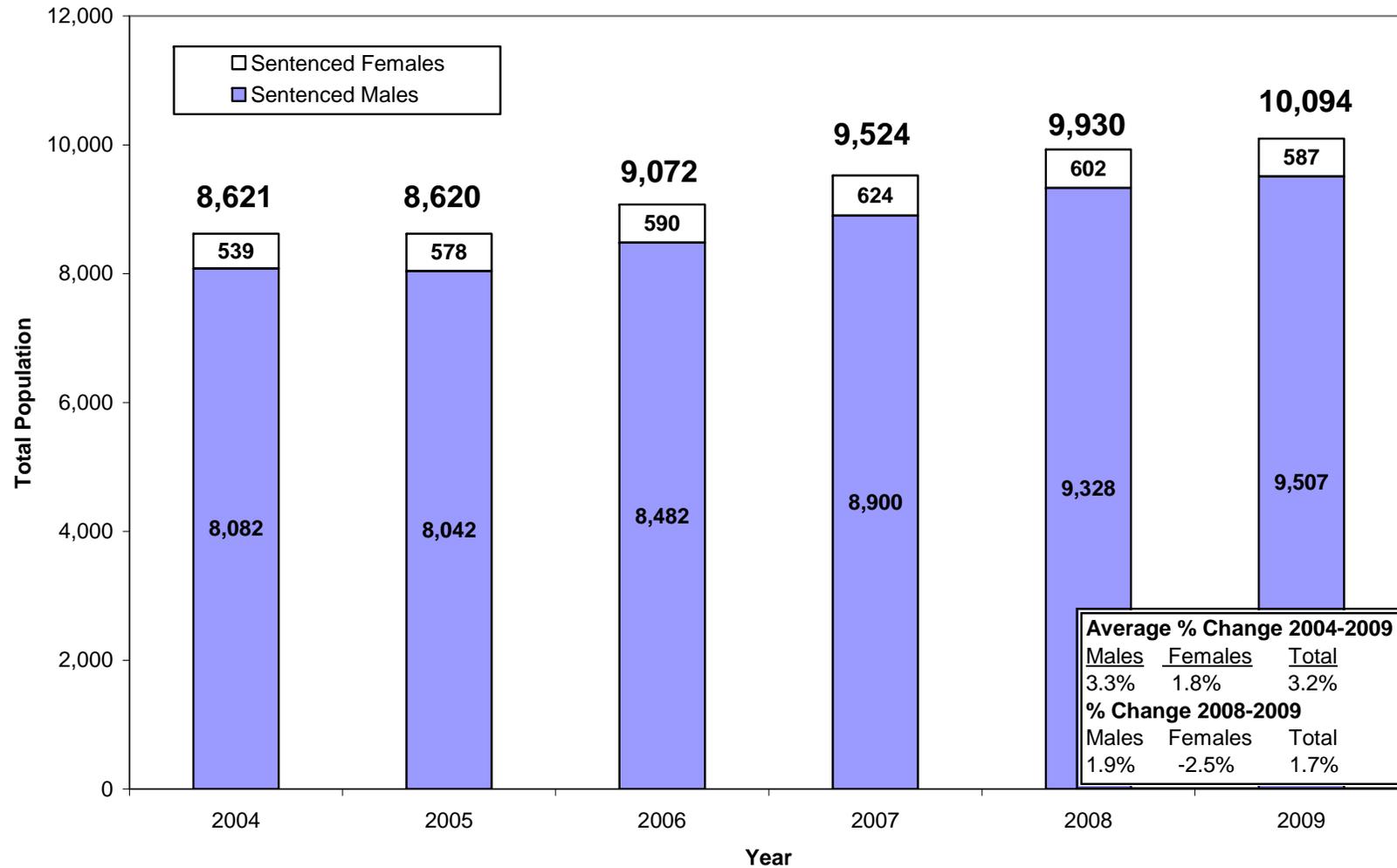
Year	Total Female Population												Yearly Average
	January	February	March	April	May	June	July	August	September	October	November	December	
<b>Actual 2009</b>	<b>605</b>	<b>609</b>	<b>591</b>	<b>611</b>	<b>607</b>	<b>601</b>							
<b>2009</b>	596	591	595	601	606	608	610	612	619	610	609	612	<b>606</b>
<b>2010</b>	605	614	613	622	629	628	637	640	635	634	631	635	<b>627</b>
<b>2011</b>	634	636	652	669	666	639	660	657	636	649	636	644	<b>648</b>
<b>2012</b>	641	641	659	660	656	652	664	661	670	674	665	662	<b>659</b>
<b>2013</b>	661	670	679	671	675	674	679	682	680	691	687	689	<b>678</b>
<b>2014</b>	711	714	716	703	709	699	705	710	706	708	703	706	<b>708</b>
<b>2015</b>	703	703	695	701	706	714	710	719	718	715	722	725	<b>711</b>
<b>2016</b>	726	731	725	734	739	728	732	730	730	737	746	742	<b>733</b>
<b>2017</b>	742	731	740	739	729	743	747	750	755	759	764	767	<b>747</b>
<b>2018</b>	770	770	772	769	763	762	766	764	756	763	760	771	<b>766</b>
<b>2019</b>	776	779	780	776	774	778	782	789	789	792	793	803	<b>784</b>

*Source: JFA Simulation Model*

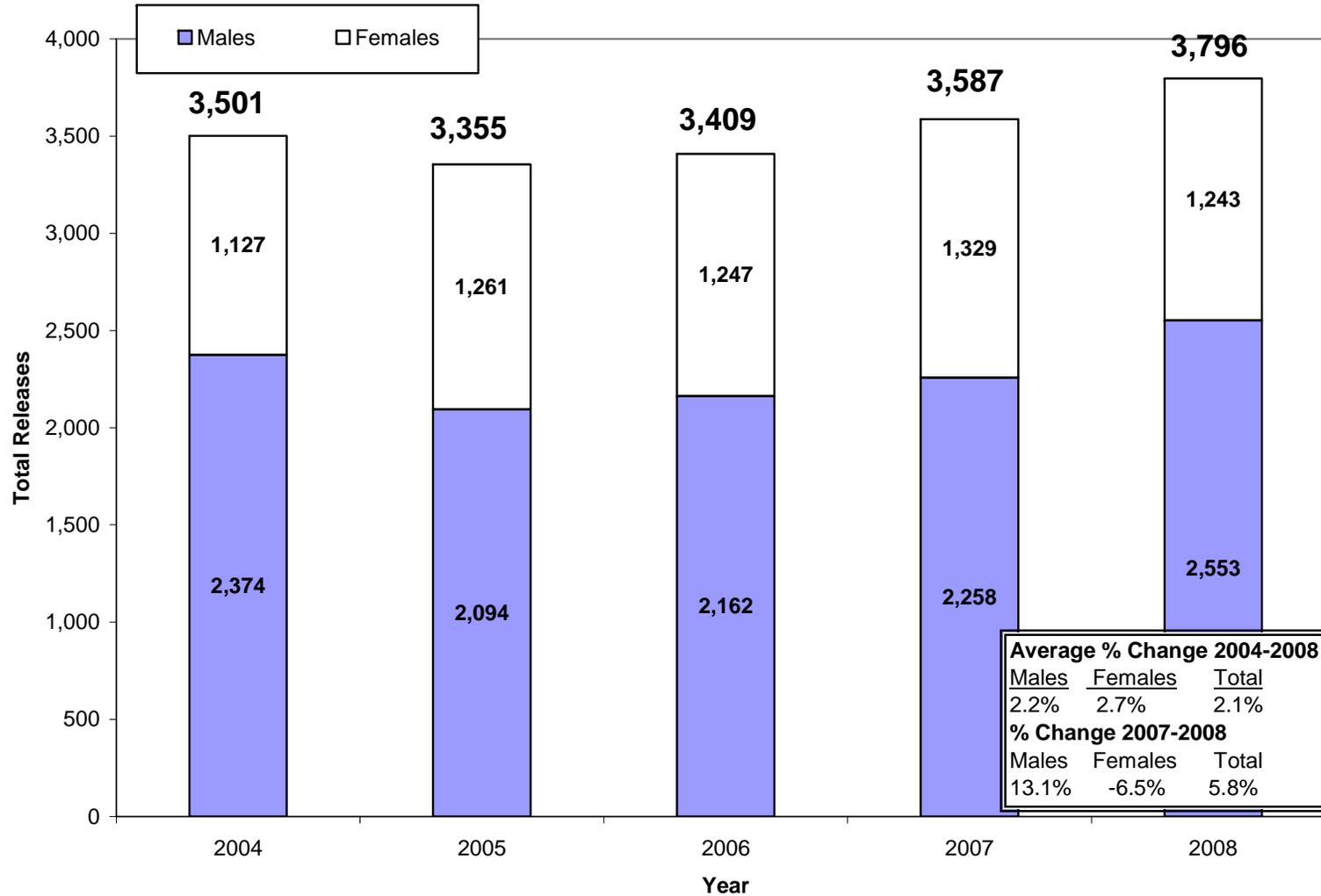
**Figure 3: Historical Criminally Sentenced Admissions by Gender 2004-2008**



**Figure 4: Historical Beginning of Year Criminally Sentenced Populations 2004-2009**



**Figure 5: Historical Criminally Sentenced Releases by Gender 2004-2008**



**Figure 6: Average Sentence of 2008 Criminally Sentenced Admissions by Offense & Gender**

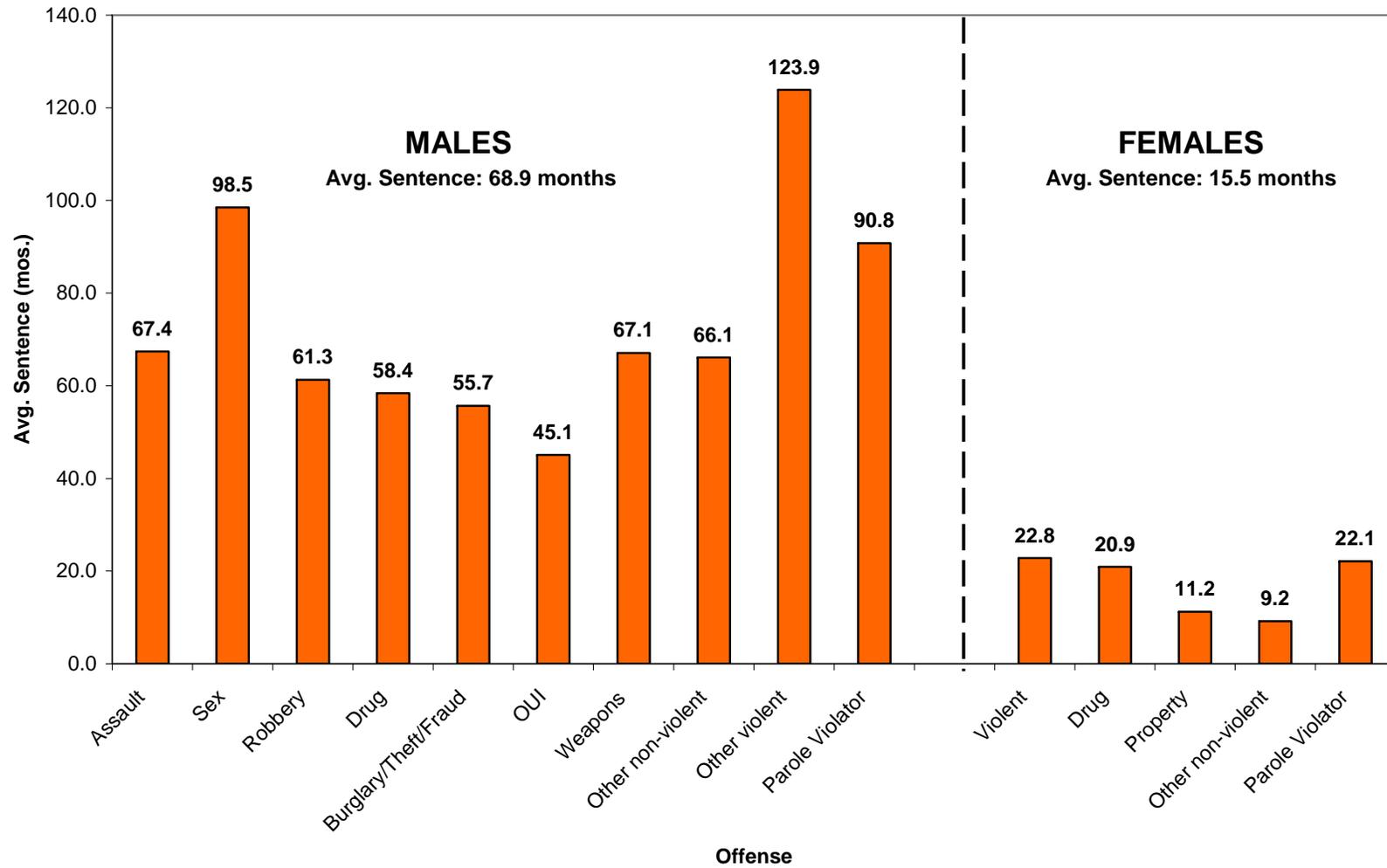
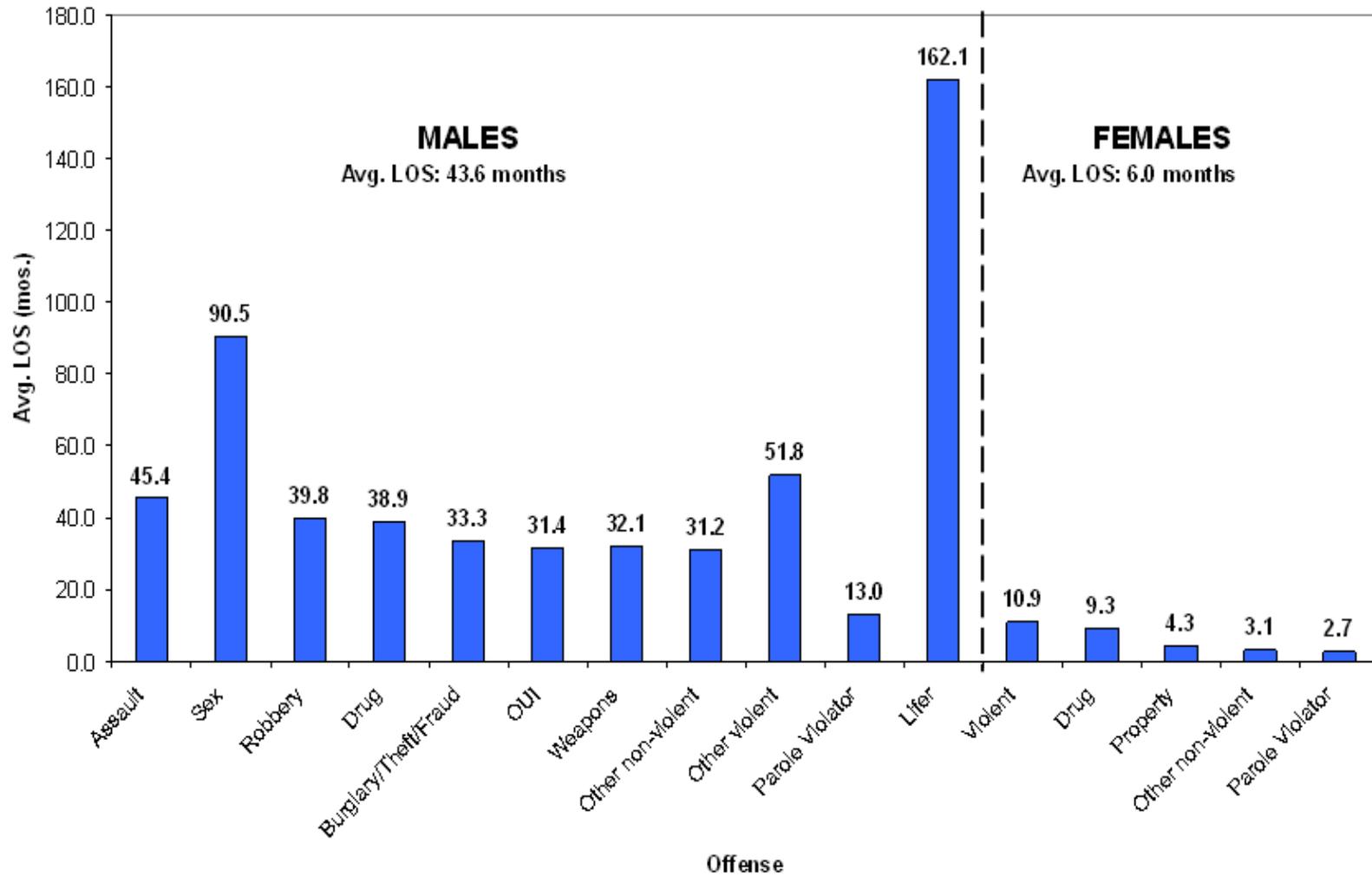
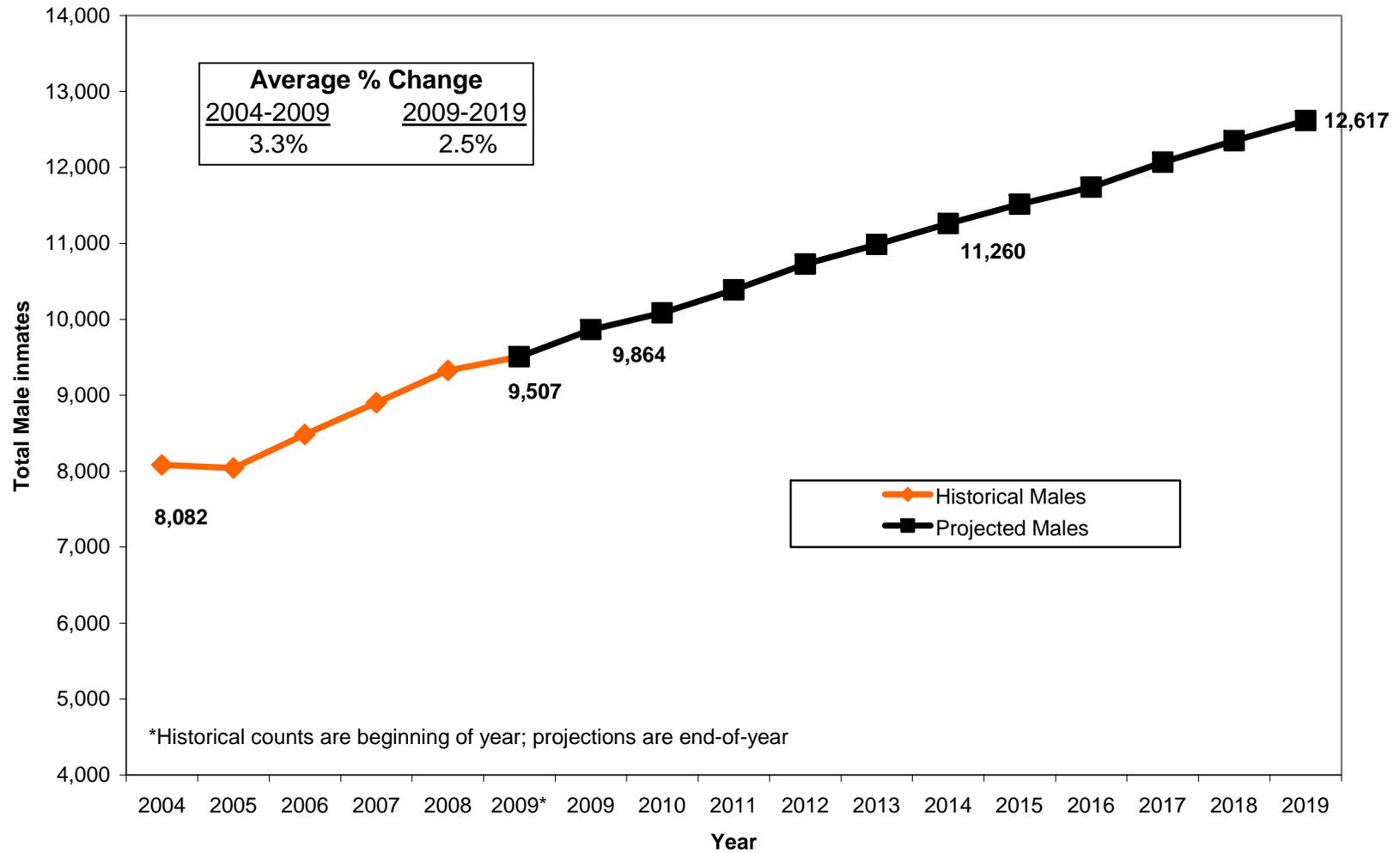


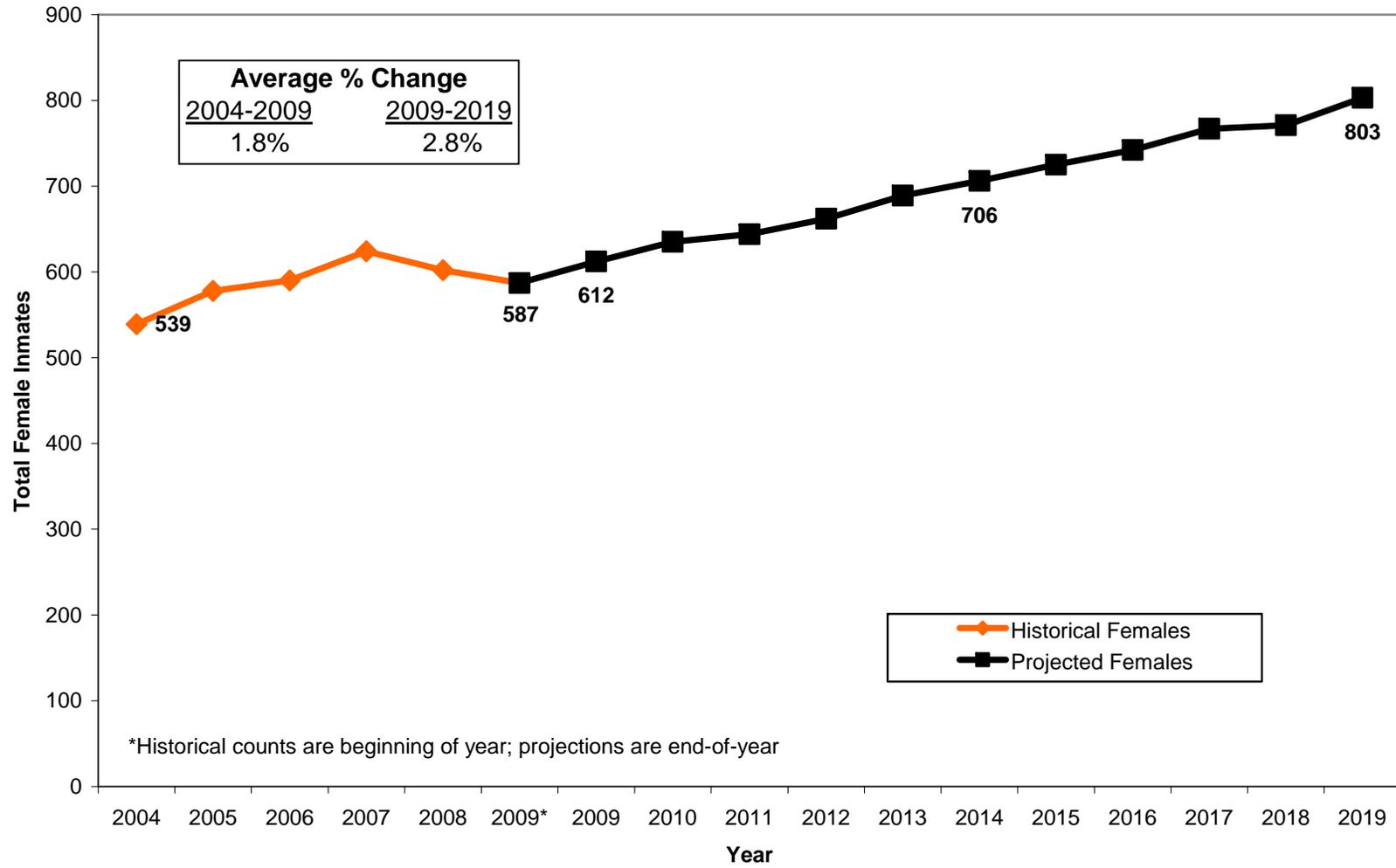
Figure 7: Average LOS of 2008 Criminally Sentenced Releases by Offense & Gender



**Figure 8: Historical & Projected Criminally Sentenced Male Population**



**Figure 9: Historical & Projected Criminally Sentenced Female Population**



**Figure 10: Historical & Projected Total Criminally Sentenced Population**

