



STATE OF MICHIGAN
DEPARTMENT OF CORRECTIONS
LANSING

JENNIFER M. GRANHOLM
GOVERNOR

PATRICIA L. CARUSO
DIRECTOR

DATE: February 1, 2006

TO: Senator Alan L. Cropsey, Chair
Senate Appropriations Subcommittee on Corrections
Representative Jack Brandenburg, Chair
House Appropriations Subcommittee on Corrections

FROM: Patricia L. Caruso, Director

SUBJECT: Prison Population Projections

Section 401 of 2005 P.A. 154 requires that the Department of Corrections submit three-year and five-year prison population projection updates by February 1st, including an explanation of the methodology and assumptions used in developing them. Our projection issued last year was 99.6% accurate, as the actual prison population at the end of calendar year 2005 was only 205 inmates lower than projected in the forecast issued last February. Our continued ability to accurately project the prison population provides us confidence that our projections – and the measures within our authority to control growth – are serving the taxpayers of Michigan well.

While the prison population increased by 820 inmates (1.7%) in calendar year 2005 to a total of 49,377, it still remains 370 prisoners lower than the highest recorded population which occurred in October of 2002. In that year, prison population increased by 2,142 and was preceded by numerous years of nearly continuous growth, sometimes by more than 3,000 inmates per year. Curtailing that long-term pattern of population expansion for the past three years is a remarkable achievement for Michigan and is a direct result of the department's Five Year Plan to Control Prison Growth that we successfully implemented with the full support of the Legislature.

If left unchecked, the historical growth pattern we would have otherwise experienced without the Five Year Plan would have yielded a prison population more than 7,000 inmates larger than it is today. At \$30,120 per inmate, this is an estimated \$210.7 million dollars in cost avoidance in the past three years with savings that will continue for several years to come.

However, our successes to date are tempered by an average prison population growth of 104 per month since February of last year. While this level of growth is about 21 per month less than projected, the linear trend that this represents – fueled by historical growth patterns – is the challenge facing us as we work together with law enforcement officials and community leaders across the state on interventions to ensure this projected linear trend does not become a reality. The linear trend would otherwise exceed funded capacity for prison beds by April 2007, and the department would need to increase costs by bringing more beds on line.

Instead, ongoing and expanded initiatives begun during the past three fiscal years and new initiatives in FY 2006 are expected to extend the run-out-of-beds-date for funded beds to March of 2008.

The initiatives already in progress include:

- Ongoing and expanded community sanctions for low level offenses.
- Ongoing and expanded community sanctions and control for parole technical violators.
- Ongoing and expanded use of community residential programs, including work-oriented community residential facilities for female parolees.
- Ongoing and expanded Intensive Reentry Units that have served as a testing ground for Michigan Prisoner ReEntry Initiative (MPRI) practices.
- First round MPRI Pilot Site implementation at 7 prison Pilot Site facilities serving 8 Pilot Site communities.
- Implementation of the Mentally Ill Inmate ReEntry Demonstration Project.
- MPRI expanded drug treatment programming.
- Evidence-based policy and procedure improvements for probation and parole sanctions, services and supervision.

Meeting our stated objectives to push the run-out-of-beds-date for funded beds into the year 2010 and beyond will require expansion of existing initiatives and several additional strategies, which are the subject of continued planning within the department. These initiatives and strategies will be enumerated as part of the Fiscal Year 2007 budget process and we look forward to fully engaging the Legislature in our plans. These plans will take into account the ever-present risk that the underlying trends driving the population projections could take a turn for the worse, so that we remain alert to that possibility.

Recent trends in the key factors which drive prison population include:

1. Increased prison intake. The number of admissions to prison with new sentences increased in 2005, following two years of decline. The increase was more than 4% over 2004 (slightly more than 400), and the bulk of the increase occurred the latter half of the year. Prison admissions increased across all major offense groups and major minimum-term categories. New court commitments increased the most (>8%). This is the most troubling of the recent trends as the department can only influence commitments to prison, not control them. Despite the increase, there is still considerable potential for growth, as the all-time record prison intake year of 2002 experienced over 800 more admissions than 2005.
2. Decreased movement to parole. The numbers of prisoners available for parole consideration declined in 2005, as nearly 2,000 fewer parole decisions were made. Consequently, transfers to parole status also decreased by more than 1,000 (a decline of >9%, and the lowest number since 2001) despite a modest 3.2% increase in the parole approval rate. Ironically, this was largely both a side effect of lower prison admissions in 2003-2004 (thus causing fewer cases to reach their Earliest Release Dates in 2005) and successful efforts to reduce parole violator technical returns to prison under the Five Year Plan to Control Prison Growth (thus reducing the numbers available for re-parole in 2005 following their revocation periods).

3. Decreased parole revocations. The goal under the Five Year Plan to Control Prison Growth has been to provide a range of appropriate local sanctions and services that respond to parole violations. Since 2003 when the monthly average was 274 per month, these numbers have been reduced. In 2005, the monthly average was 240. Efforts surrounding the Michigan Prisoner ReEntry Initiative are expected to yield further improvement in parole revocations for 2006 and beyond.

The forecast in the attached Prison Population Projection Report (MDOC/Policy & Strategic Planning Administration, January 2006) essentially used the linear trend line that resulted from the above factors as a starting point upon which to base the projection model, and then built in the estimated future impact of the various ongoing and new FY 2006 initiatives to generate the projection update. This “projection update forecast” predicts population growth at an average pace of about 45 inmates per month in 2006, followed by about 64 per month in 2007, and by about 103 per month thereafter. This gradually increasing pace of projected growth results from the maximum impacts of the various initiatives running their course.

Maintaining zero population growth over a very long period of time is extremely difficult because of the extensive, and often offsetting, interactions between the various factors that drive population levels. The past year is an excellent illustration of this as lower prison admissions in 2003 and 2004 inevitably led to fewer cases available for parole in 2005, despite a modestly higher parole approval rate and a return to higher prison intake in 2005. The attached report includes more specific information on the assumptions and the methodology by which the projection update was derived.

ATTACHMENT

- c: Mary A. Lannoye, Office of the State Budget
Jacques McNeely, Office of Public Protection
Marilyn Peterson, House Fiscal Agency
Lindsay Hollander, Senate Fiscal Agency
MDOC Executive Policy Team

REPORT TO THE LEGISLATURE
Pursuant to P.A. 154 of 2005
Section 401
Prison Population Projection Report
January 2006

Review of preliminary, full-year intake and release trends in 2005 compared to 2004 shows that investments in administrative and statutory measures to keep prison population within capacity under the department's Five Year Plan to Control Prison Growth have remained effective, although a trend toward modest population increases has resumed following two consecutive years of decline. The prison population finished calendar year 2005 at 49,377 – which was up by 820 total inmates for the year as a whole (an increase of 1.7%). This was the first annual growth in prison population since 2002, but the pace of growth in 2005 was much slower than historical growth patterns. The average prison population increase in the ten years prior to 2003 was more than 1,400 inmates per year.

The community residential programs (CRP) prisoner population fell again in 2005 – by 158 or nearly 58% – to a year-end total of 116 due to the Truth-in-Sentencing law's prohibition on housing affected State prisoners anywhere other than in secure institutions and camps until at least their full minimum sentences are served. It is perhaps useful to recall that the CRP prisoner population peaked in 1992 at nearly 3,500 low-risk offenders.

Official prison population projections issued in February of 2005 concluded the year 205 inmates higher than actual population (+0.4%). This is an exceptional level of accuracy with a prison population of Michigan's size, particularly given the myriad of initiatives that have been underway to help control prison growth.

Nevertheless, in light of the continued successes of the Five Year Plan, as well as imminent parole of the first full cohort of prisoners via implementation of the Michigan Prisoner ReEntry Initiative (MPRI), the nominal over-projection suggests that the older forecast can now be lowered – not only to the much-improved linear population trend line of the past 10 months, but even to a degree below that based on the anticipated enhanced effects of both expanded, ongoing population control efforts and new FY 2006 initiatives.

Methodology

Michigan's prison population projections are generated by a computerized simulation model, developed originally by the National Council on Crime and Delinquency (NCCD) [their initial mainframe computer model, not the later micro-based, somewhat generic, and thus comparatively superficial PROPHET system]. It was then adapted for Michigan by research and planning staff in the Michigan Department of Corrections. The computerized simulation model mimics the movement of prisoners through the Corrections system and uses past practice and prior year trends to predict future patterns.

The projection model itself is simply an automated shell into which numerous probability distribution arrays must be fed (after creation outside the model by extensive statistical analyses), regarding how and when prisoners move through the various points in the corrections process (e.g., intake at reception, time to each subsequent parole hearing, likelihood of parole, timing of

release to parole, chances of return as a violator, and discharge from sentence). These arrays are broken down by the various population subgroups with particular characteristics (i.e., offense, sentence length, etc.).

Michigan's projection model incorporates finer resolution than the original NCCD model. For example, Michigan's model has up to 50 distinct maximum-term groups, each of which can have up to six minimum-term pairings. This level of detail allows particular attention to relatively short sentences of 2 years or less, which have the most influence on 3 to 5 year projection accuracy.

The projection model does not forecast the annual number of prison admissions; but once entered as values, the model does disaggregate admissions randomly based on past distributions. Then, the projection model simulates the flow of existing prison population and new intake through the system, including feedback loops for parole violators with and without new sentences.

The source of the raw data for the projections is downloads from the MDOC Corrections Management Information System (CMIS), and the data are analyzed via the Statistical Package for the Social Sciences (SPSS). Once the projection model shell is populated with probability distribution arrays, numerous iterations of the model are run, "fine tuning" against two or more years of historical, actual trace vectors for purposes of validating the rebuilt data. Multiple projection runs can be combined – especially in times of particular uncertainty – to generate a confidence interval based on the monthly minimums and maximums for all of the runs, with the expectation that future population will more assuredly fall within the confidence interval.

After a successful result is obtained (which must track past trends accurately, and must correspond to short-term expectations for the future informed by considerable independent analysis of recent trends), then the projections are issued by the department.

Exceptions to the model's track record of better than 99% short-term projection accuracy have sometimes occurred over the years, when criminal justice practices and trends deviated from the past or showed unstable or uncharacteristic patterns – in which case the problem has generally been inadequate history against which to validate and fine-tune the results. Long-term projections are generally considered less reliable because of the difficulty associated with predicting multi-year prison intake volume as well as changes in laws and policies that may affect the underlying statistical distributions which drive the model. That is why the projections are updated at least once each year – to adjust for any new laws, policies, court rulings, operational practices or trends.

The model can also be used for "what if" analyses, such as simulating the impact of proposed legislative sunset provisions on modifications to sentencing laws.

Assumptions

Prison Intake

The primary trend that led to renewed prison population growth in 2005 is increased prison intake. Following two years of decline from the all-time highest single year for prison admissions (2002), intake rebounded by 4% in 2005 (over 400 new inmates above 2004). The

admissions increase occurred primarily for new court commitments (>8%), and was present among all major offense groups and all major minimum term categories. Most of the increase occurred in the latter half of the year, so the projection update assumes one more modest intake jump in 2006 based on a continuation of the July-December 2005 pace through the first half of 2006, but then assumes flat admissions thereafter throughout the next four years of the projection. There is, of course, always the potential that prison intake could instead keep rising, but the projection update assumes that some of the initiatives to control prison growth will be able to either directly or indirectly offset that prospect and perhaps even bring intake down more.

Community Residential Programs (CRP) Prisoner Population

The CRP prisoner population fell by 58% (-158) in 2005 to only 116 offenders, and is expected to continue to fall as the pre Truth-in-Sentencing (TIS) prison population gradually falls to zero. Post-ERD (Earliest Release Date) prisoners are now also accepted into the program under certain conditions, but nearly half of the current CRP prisoner population continues to be pre-TIS cases. The projection update assumes that the CRP prisoner population will continue to fall until it stabilizes at about 60 post-ERD prisoners by mid-2006.

Obviously, consideration will need to be given to redefining the concept and role of CRP in the future if the program is to remain tenable. That is unfortunate, since in its heyday CRP was a program in which nearly 3,500 low-risk prisoners were actively involved in getting established with housing and jobs in the community to demonstrate their readiness for parole approval, with only a 1-2% rate of new criminal activity. The CRP demonstration period in advance of parole consideration is a vital benefit of the program, as the parole approval rate for successful CRP prisoners is 95-98%, while the parole approval rate for their contemporaries housed in camps is only 68%. This is because the parole board has to guess which cases housed in camps will succeed as well as cases housed in CRP. The only positive to the demise of CRP for prisoners is that the dynamic risk assessment and community in-reach features of MPRI may eventually help to increase the confidence of the parole board to the level achieved by CRP.

Parole

Moves to parole decreased by more than 9% in 2005, mostly because of fewer prison admissions and fewer parole violator technical returns in 2003 and 2004 compared to the peak year for each (2002). When fewer offenders come into the prison system, there are inevitably fewer prisoners available for release in subsequent years. The decline in transfers to parole status occurred despite a modest 3.2% increase in the parole approval rate to 54.7%. The projection update assumes that the annual number of moves to parole will stabilize as prison intake and parole revocations also stabilize, and then will gradually increase as MPRI raises the confidence of the parole board in both the adequacy of parole plans and the mitigation of offender risk to a degree that increases the parole approval rate without jeopardizing public safety.

Parole Violator Technical Returns to Prison (parole revocation)

The decrease in moves to parole in 2005 led to a decline in the parole population and an accompanying decrease in the number of parole violator technical (PVT) returns. Given assumptions that the annual number of moves to parole will stabilize and then increase, and that efforts related to MPRI will increase success on parole by at least 6%, the projection update assumes that the annual number of PVTs will decline.

Continued and Expanded Existing Initiatives

The projection update assumes varying impact from ongoing and expanded initiatives, which is difficult to isolate because of the complexity of the impact on each other (e.g., they target similar cases at different stages in the system), so overall impact is derived from the projection model.

- Ongoing and expanded community sanctions for low level offenses.
- Ongoing and expanded community sanctions and control for parole technical violators.
- Ongoing and expanded use of community residential programs - including work-oriented community residential facilities for female parolees.
- Ongoing and expanded Intensive Reentry Units (IRU) that have served as a testing ground for Michigan Prisoner ReEntry Initiative (MPRI) practices.
- First round MPRI Pilot Site implementation at 7 Prison Pilot Site Facilities serving 8 Pilot Site communities.
- Implementation of the Mentally Ill Inmate ReEntry Demonstration Project.
- MPRI expanded drug treatment programming.
- Evidence-based policy and procedure improvements for probation and parole sanctions, services and supervision.

Prison Population Projections and Bedspace

Chart 1 summarizes the revised and extended prison population projections through 2010, and shows the tremendous gains in prison population stability achieved in 2003-2005 compared to the immediately preceding years. Table 1 (quarterly figures) and Table 2 (monthly figures) show the specific revised projection details. Chart 1 also shows:

- The linear trend line that has occurred since February of 2005, which is an exceptionally good fit to the actual population line through that stretch of time, making it the pattern the projection would have followed if not for the anticipated impact of ongoing and expanded population control efforts and the new FY 2006 initiatives (especially MPRI).
- The FY 2006 funded capacity line, demonstrating the point at which the projection update expects prison population to exceed capacity (March 2008), since no capacity increases are anticipated after FY 2006.

In conclusion, continued benefits of the original Five Year Plan to Control Prison Growth reduced prison population during 2003-2004, but modest population growth, compared to past history, resumed in 2005. Ongoing and expanded efforts to further control population growth, as well as new FY 2006 initiatives - especially the implementation of the MPRI - are now expected to keep prison population within funded capacity until March of 2008. Extending the run-out-of-beds-date into 2010 and beyond, however, will require additional new initiatives beginning in FY 2007 in order for them to have adequate prison bed impact by early 2008.

Chart 1
Michigan Department of Corrections
PROJECTED PRISON POPULATION

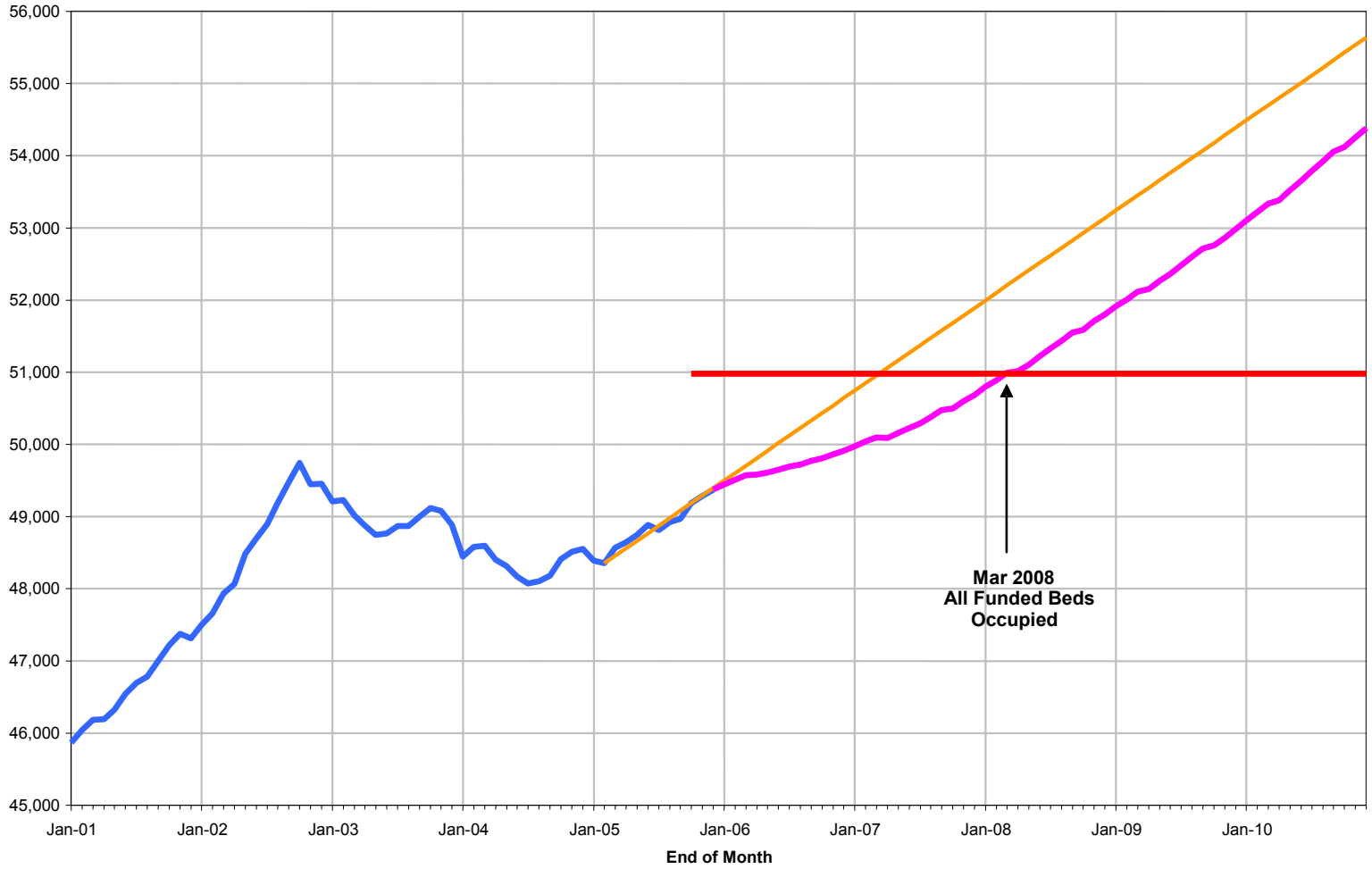


Table 1

Projected Prison Population				
January, 2006				
<u>End of Month</u>	<u>Total Prisoner Population Projection</u>	<u>Subtract Estimated CRP</u>	<u>Projected Prison/Camp Population</u>	<u>Yearly Growth</u>
Mar-06	49,669	95	49,574	
Jun-06	49,715	65	49,650	
Sep-06	49,832	60	49,772	
Dec-06	49,974	60	49,914	537
Mar-07	50,159	60	50,099	
Jun-07	50,288	60	50,228	
Sep-07	50,537	60	50,477	
Dec-07	50,743	60	50,683	769
Mar-08	51,051	60	50,991	
Jun-08	51,280	60	51,220	
Sep-08	51,614	60	51,554	
Dec-08	51,857	60	51,797	1,114
Mar-09	52,174	60	52,114	
Jun-09	52,423	60	52,363	
Sep-09	52,771	60	52,711	
Dec-09	53,044	60	52,984	1,187
Mar-10	53,396	60	53,336	
Jun-10	53,713	60	53,653	
Sep-10	54,118	60	54,058	
Dec-10	54,441	60	54,381	1,397

Table 2

**Projected Prison Population
January, 2006**

<u>End of Month</u>	<u>Total Prisoner Population Projection</u>	<u>Subtract Estimated CRP</u>	<u>Projected Prison/Camp Population</u>	<u>Yearly Growth</u>
Jan-06	49,556	115	49,441	
Feb-06	49,617	105	49,512	
Mar-06	49,669	95	49,574	
Apr-06	49,666	85	49,581	
May-06	49,685	75	49,610	
Jun-06	49,715	65	49,650	
Jul-06	49,753	60	49,693	
Aug-06	49,779	60	49,719	
Sep-06	49,832	60	49,772	
Oct-06	49,867	60	49,807	
Nov-06	49,923	60	49,863	
Dec-06	49,974	60	49,914	537
Jan-07	50,036	60	49,976	
Feb-07	50,099	60	50,039	
Mar-07	50,159	60	50,099	
Apr-07	50,149	60	50,089	
May-07	50,218	60	50,158	
Jun-07	50,288	60	50,228	
Jul-07	50,348	60	50,288	
Aug-07	50,437	60	50,377	
Sep-07	50,537	60	50,477	
Oct-07	50,555	60	50,495	
Nov-07	50,657	60	50,597	
Dec-07	50,743	60	50,683	769
Jan-08	50,857	60	50,797	
Feb-08	50,950	60	50,890	
Mar-08	51,051	60	50,991	
Apr-08	51,071	60	51,011	
May-08	51,161	60	51,101	
Jun-08	51,280	60	51,220	
Jul-08	51,391	60	51,331	
Aug-08	51,494	60	51,434	
Sep-08	51,614	60	51,554	
Oct-08	51,647	60	51,587	
Nov-08	51,766	60	51,706	
Dec-08	51,857	60	51,797	1,114
Jan-09	51,977	60	51,917	
Feb-09	52,065	60	52,005	
Mar-09	52,174	60	52,114	
Apr-09	52,210	60	52,150	
May-09	52,326	60	52,266	
Jun-09	52,423	60	52,363	
Jul-09	52,538	60	52,478	
Aug-09	52,660	60	52,600	
Sep-09	52,771	60	52,711	
Oct-09	52,813	60	52,753	
Nov-09	52,918	60	52,858	
Dec-09	53,044	60	52,984	1,187
Jan-10	53,161	60	53,101	
Feb-10	53,276	60	53,216	
Mar-10	53,396	60	53,336	
Apr-10	53,440	60	53,380	
May-10	53,579	60	53,519	
Jun-10	53,713	60	53,653	
Jul-10	53,850	60	53,790	
Aug-10	53,982	60	53,922	
Sep-10	54,118	60	54,058	
Oct-10	54,178	60	54,118	
Nov-10	54,312	60	54,252	
Dec-10	54,441	60	54,381	1,397

MDOC Office of Research & Planning 01/22/06