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STATE OF MICHIGAN
DEPARTMENT OF CORRECTIONS
LANSING

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DATE: February 1, 2007

TO: Senator Alan L. Cropsey, Chair
Senate Appropriations Subcommittee on Judiciary and Corrections
Representative Alma Wheeler-Smith, Chair
House Appropriations Subcommittee on Corrections

FROM: Patricia L. Caruso, Director

SUBJECT: Prison Population Projections

Section 401 of PA 331 of 2006 requires that the Department of Corrections submit three-year and five-year prison population projection updates by February 1, including an explanation of the methodology and assumptions used in developing them. This report can be viewed at www.michigan.gov/corrections.

c: Bob Emerson, State Budget Director
Jacques McNeely, Office of the State Budget
Lindsay Hollander, Senate Fiscal Agency
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MDOC Executive Policy Team

REPORT TO THE LEGISLATURE
Pursuant to P.A. 331 of 2006
Section 401
Prison Population Projection Report
January 2007

After 20 years of nearly continuous prison population growth - as high as 4,000 prisoners a year at times - the size of the prison population was successfully controlled for more than three years under the Department's Five Year Plan to Control Prison Growth (from October 2002 through February 2006). During that time, prison population was gradually reduced by nearly 1,200 inmates through calendar year 2004, and then it rebounded gradually by about 900 from the start of calendar year 2005 through the first couple of months of 2006. At the end of that time, the prison population remained 262 inmates lower than what had been the October 2002 record high.

Then, in late February 2006, some highly publicized crimes caused the entire Michigan criminal justice system to react with an escalating pattern of more arrests, more sentences to prison, fewer paroles and more revocations of parole. The patterns for growth and prison population size that followed the widespread media attention not only eliminated the gains of the successful prison control strategies but also now appear to represent a "new normal" for the pressures that drive prison population. Every criminal justice decision maker from police on the streets through district and circuit court judges, jailers, parole agents and the parole board was affected and there is little evidence that these pressures will ease in the short term absent new approaches to control growth.

Review of circuit court activity, prison intake, prison release and violator return trends in 2006 compared to 2005 indicate that the entire criminal justice system has become much tougher virtually across the board. Consequently, the prison population increased by 2,077 (4.2%) in calendar year 2006 – an average of 173 more prisoners each month (559 in March alone) – to a population size at the end of 2006 that had not been expected until September 2008.

The prison population is now larger than at any time in history, ending calendar year 2006 at 51,454, which is over 1,700 higher than the previous high set in October 2002. In contrast, the community residential programs (CRP) prisoner population fell again in 2006 – by 55 (47%) – to a year-end total CRP prisoner population of only 61 inmates (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 prisoners.

Official prison population projections that were issued in February of 2006 were 1,540 inmates lower than actual population at the end of the year (-3%). The 2006 trends in key corrections indicators clearly show how the population forecast was overwhelmed by renewed growth:

1. Felony court dispositions through October were on a pace to increase by nearly 4,000 in 2006 and the prison commitment rate had increased by 1%. (This represents people rather than total dispositions, and there is a lag in the availability of full-year felony court disposition data.)

2. Prison Intake increased by 8% in 2006 (about 850 more admissions than in 2005) to a record high of 11,091 as a consequence of both the increased felony court dispositions and the higher prison commitment rate. This surpassed the old prison intake record set in 2002. The largest increase was in new court commitments (+11%), but probation violator intake and parole violators with new sentences also increased. Early indications are that the 2006 increase in prison admissions occurred across all major offense groups and major minimum term categories (except that life sentences were down by 7%). Leading the increases were drug and other nonviolent crimes (+11%) and minimum sentences of 12 months or less (+23%).

3. Movement to parole in 2006 was marginally less than in 2005 (down 0.4%) and thus could not offset the higher prison intake. There were about 500 more parole decisions in 2006 than in 2005, but a 3.2% lower parole approval rate led to more parole denials and fewer parole approvals.

4. Parole Revocations averaged 264 per month, yielding a preliminary total of 3,171 which was an 11% increase over 2005 (more than 300 additional revocations), and only 118 fewer than the record year set in 2002.

Prison Population Projection 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.

New Prison Population Projection Assumptions

Prison Intake

The principal trend that led to significant prison population growth in 2006 was increased prison intake. The projection forecast issued a year ago assumed a modest one or two percent increase in 2006 admissions over 2005 intake, so the 8% jump was a surprise. There is no indication so far that prison intake will fall back from the 2006 levels in the short term, but the pace of admissions did at least stabilize in the latter part of the year, so this projection update assumes only small additional increases in annual admissions during the next five years – unless, of course, new approaches to control prison growth can directly or indirectly counter that outlook and bring prison intake back down.

Community Residential Programs (CRP) Prisoner Population

The CRP prisoner population is assumed to stay fixed at the current very small size (61 prisoners at the end of the year) throughout this projection update because the pre-Truth-in-Sentencing (TIS) prison population that remained eligible for CRP placement before reaching the ERD

(Earliest Release Date) has dwindled to little or nothing. Post-ERD prisoners continue to be accepted into the program under certain conditions, but there has been no sign of any potential for growth under the current eligibility requirements.

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 felony convictions. 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 the Michigan Prisoner ReEntry Initiative (MPRI) may eventually help to increase the confidence of the parole board to the level achieved by CRP placement.

Parole

Moves to parole in 2006 were only marginally fewer than in 2005, and would have been higher if not for the 3.2% decrease in the parole approval rate to only 51.5% (since there were about 500 more parole decisions than in 2005). This projection update assumes that the annual number of moves to parole will gradually increase throughout the forecast as the 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 enables the parole approval rate to increase without jeopardy to public safety.

Parole Violator Technical Returns to Prison (parole revocation)

Given assumptions that the annual number of moves to parole will gradually increase and that efforts related to the MPRI will also increase success on parole (early data now show a 21% improvement on a small scale to date), this projection update assumes that the annual number of parole revocations will gradually decline – especially as the MPRI expands statewide beginning in FY 2008.

Continued and Expanded Existing Initiatives

This projection update assumes varying impact from ongoing and expanded initiatives, which is difficult to isolate because of the complexity of the individual impacts on each other (i.e., 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.

- Continued use of Intensive Reentry Units (IRU), which have served as a valuable testing ground for MPRI best practices, until MPRI goes up to scale statewide, then addressing all cases currently engaged by the IRU's.
- First and second round MPRI Pilot Site implementation at 12 Prison Pilot Site Facilities now serving 15 Pilot Site communities throughout FY 2007, then statewide in FY 2008.
- Continued implementation of the Mentally Ill Inmate ReEntry Demonstration Project.
- MPRI expanded drug treatment programming.
- Implementation of a new Collaborative Case Management System for parolees.

Prison Population Projections and Bedspace

Chart 1 summarizes the revised and extended prison population projections through 2011, and shows both the tremendous gains in prison population stability achieved in 2003-2005, as well as the renewed population growth experienced in 2006. 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 September 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 the ongoing and expanded existing initiatives (especially continued expansion of the MPRI).

- The FY 2007 appropriated prison capacity line, which net operating capacity (i.e., currently opened on-line beds) has already exceeded, and prison population is about to surpass.

- Planned future net operating capacity, which shows the current prison capacity expansion schedule for all remaining off-line but planned prison beds in the pipeline, demonstrating the point in time (September 2007) at which this projection update now expects prison population to exceed capacity absent new approaches.

In conclusion, significant prison population growth resumed in calendar year 2006 and is expected to slow a bit but continue absent new approaches. The Department's Five Year Plan to Control Prison Growth successfully held the line on prison population during 2003-2005, but was unable to stem the tide of rapid population growth following extensive media attention on some highly publicized crimes in February 2006. As a consequence, new approaches will be needed quickly to extend the run-out-of-beds-date beyond September 2007. The Department anticipates the announcement and explanation of proposed new strategies to address the looming prison bed space problem during and shortly after the release of the Administration's FY 2008 budget recommendations.

Policy and Strategic Planning Administration; February 1, 2007

Michigan Department of Corrections

PROJECTED PRISON POPULATION

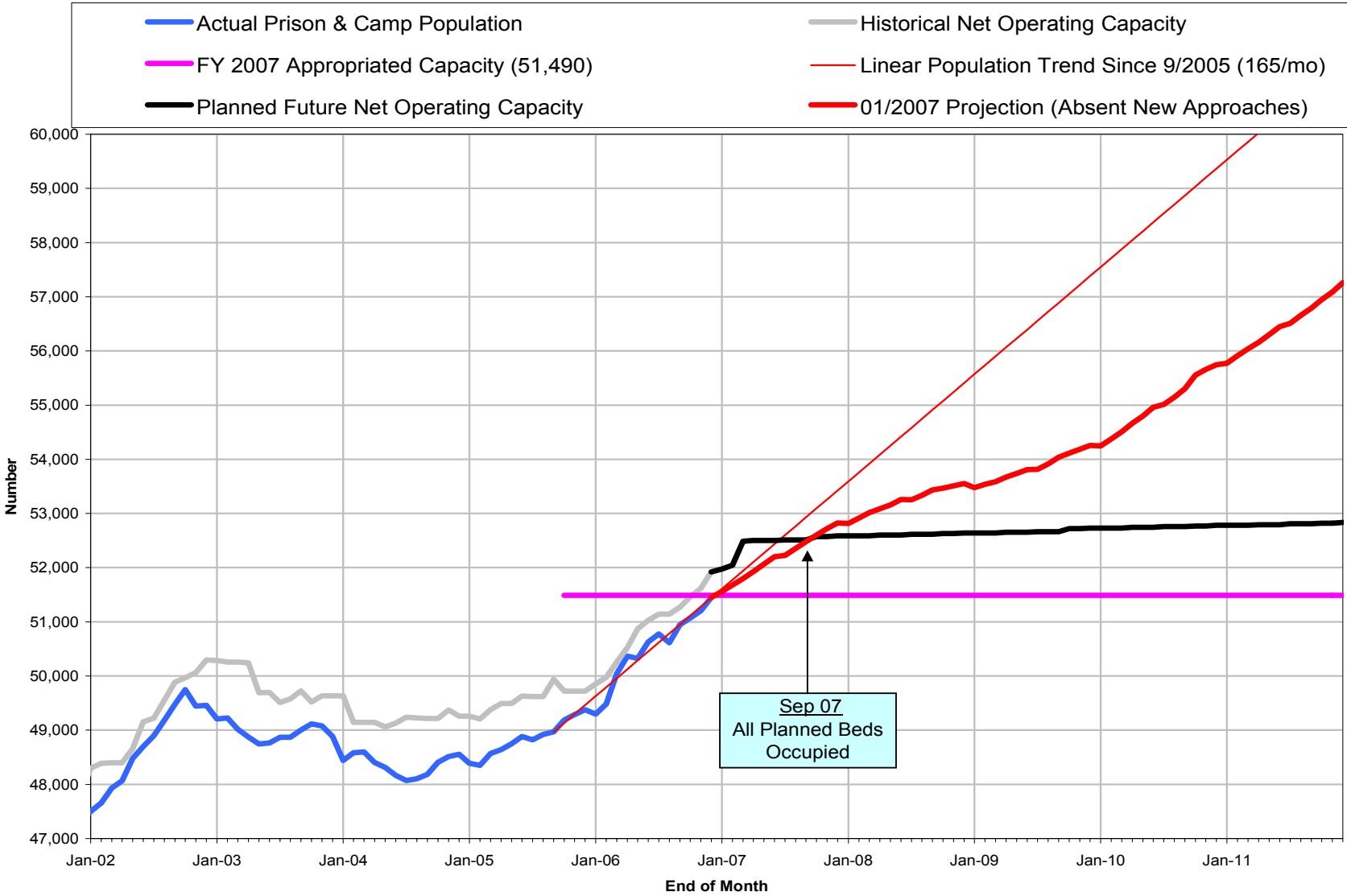

Table 1

Projected Prison Population
January, 2007

End of Month	Total Prisoner Population Projection	Subtract Estimated CRP	Projected Prison/Camp Population	Yearly Growth
Mar-07	51,859	60	51,799	
Jun-07	52,265	60	52,205	
Sep-07	52,540	60	52,480	
Dec-07	52,888	60	52,828	1,374
Mar-08	53,078	60	53,018	
Jun-08	53,315	60	53,255	
Sep-08	53,496	60	53,436	
Dec-08	53,614	60	53,554	726
Mar-09	53,645	60	53,585	
Jun-09	53,868	60	53,808	
Sep-09	54,095	60	54,035	
Dec-09	54,314	60	54,254	700
Mar-10	54,571	60	54,511	
Jun-10	55,022	60	54,962	
Sep-10	55,362	60	55,302	
Dec-10	55,804	60	55,744	1,490
Mar-11	56,098	60	56,038	
Jun-11	56,505	60	56,445	
Sep-11	56,855	60	56,795	
Dec-11	57,319	60	57,259	1,515

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Table 2

Projected Prison Population
January, 2007

End of Month	Total Prisoner Population Projection	Subtract Estimated CRP	Projected Prison/Camp Population	Yearly Growth
Jan-07	51,620	60	51,560	
Feb-07	51,742	60	51,682	
Mar-07	51,859	60	51,799	
Apr-07	51,989	60	51,929	
May-07	52,125	60	52,065	
Jun-07	52,265	60	52,205	
Jul-07	52,290	60	52,230	
Aug-07	52,411	60	52,351	
Sep-07	52,540	60	52,480	
Oct-07	52,660	60	52,600	
Nov-07	52,778	60	52,718	
Dec-07	52,888	60	52,828	1,374
Jan-08	52,874	60	52,814	
Feb-08	52,976	60	52,916	
Mar-08	53,078	60	53,018	
Apr-08	53,147	60	53,087	
May-08	53,219	60	53,159	
Jun-08	53,315	60	53,255	
Jul-08	53,312	60	53,252	
Aug-08	53,395	60	53,335	
Sep-08	53,496	60	53,436	
Oct-08	53,527	60	53,467	
Nov-08	53,568	60	53,508	
Dec-08	53,614	60	53,554	726
Jan-09	53,537	60	53,477	
Feb-09	53,597	60	53,537	
Mar-09	53,645	60	53,585	
Apr-09	53,732	60	53,672	
May-09	53,800	60	53,740	
Jun-09	53,868	60	53,808	
Jul-09	53,872	60	53,812	
Aug-09	53,975	60	53,915	
Sep-09	54,095	60	54,035	
Oct-09	54,173	60	54,113	
Nov-09	54,245	60	54,185	
Dec-09	54,314	60	54,254	700
Jan-10	54,307	60	54,247	
Feb-10	54,434	60	54,374	
Mar-10	54,571	60	54,511	
Apr-10	54,722	60	54,662	
May-10	54,858	60	54,798	
Jun-10	55,022	60	54,962	
Jul-10	55,073	60	55,013	
Aug-10	55,207	60	55,147	
Sep-10	55,362	60	55,302	
Oct-10	55,615	60	55,555	
Nov-10	55,718	60	55,658	
Dec-10	55,804	60	55,744	1,490
Jan-11	55,833	60	55,773	
Feb-11	55,969	60	55,909	
Mar-11	56,098	60	56,038	
Apr-11	56,219	60	56,159	
May-11	56,361	60	56,301	
Jun-11	56,505	60	56,445	
Jul-11	56,572	60	56,512	
Aug-11	56,719	60	56,659	
Sep-11	56,855	60	56,795	
Oct-11	57,006	60	56,946	
Nov-11	57,148	60	57,088	
Dec-11	57,319	60	57,259	1,515

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