REPORT TO THE LEGISLATURE
Pursuant to P.A. 87 of 2021
Article II, Section 401
Prison Population Projection Report
May 2022

INTRODUCTION

The Michigan prison population decreased by 1,431 prisoners during calendar year 2021 to a total of 32,186 prisoners at the end of the year (-4.3%). The prison only population has not been this low since early 1992 and the total prisoner population hasn't been this low since late 1989 when Michigan had prisoners reacclimating to society while serving sentence in halfway houses (Community Residential Programs – CRP – eliminated in 1998 by Truth in Sentencing statutes).

The 2021 year-end prison population was 37.6% smaller than the record high of 51,554 prisoners reached in March of 2007 (19,368 prisoners smaller than the peak population).

During 2021, the net operating capacity of the prisons decreased by 5,040 beds leaving the capacity of the system 91.8% occupied at the end of the year with 2,870 beds available at various security levels across 27 prison facilities.

The population projections issued in March of last year were 99.2% accurate at the end of 2021 (269 projected prisoners higher than the actual prisoner population).

FACTORS DRIVING PRISON POPULATION CHANGE

The decline in the size of the prison population during 2021 was primarily due to a decrease in technical probation and parole violators sent to prison.

While overall prison intake increased in 2021 (up 10.8% from 2020), probation violators sent to prison either for probation violations or because of new sentences for crimes committed on probation dropped 4.7%. The fewer probation violators sent to prison represented the 8th consecutive year of decline in this intake category, and a 76.5% decline since the 2002 peak.

Additionally, parole violator returns to prison dropped 2.3%. This drop can be attributed to the opening of the Macomb Parole Violation Unit (MPVU). The MPVU opened in summer 2021 with the purpose of enhancing public safety by holding suspected/alleged parole rule violators during the investigation.

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). 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 at each hearing, 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 the 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 projection is downloads from the MDOC data systems 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.

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.

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

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.

NEW PRISON POPULATION PROJECTION ASSUMPTIONS

The prison population projections in this report are a baseline forecast that assumes no new legislative or policy initiatives. Therefore, the assumptions underlying these projections pertain to the key factors that drive prison population, prison intake, paroles, and parole revocations.

Prison Intake

For the first half of 2021, court dispositions to prison were comparable to 2020 (down 1.3%) and prison intake was similar (down only 35 cases from 2020). By July 2021, however, the monthly prison

commitment rate returned to pre-pandemic levels and recovery from the COVID-19 pandemic became more evident. Comparing the first half of 2021 to the second half, court dispositions to prison increased 33.7%, the prison commitment rate increased 3.6% (from 15.8% to 19.4%), and prison intake increased 35.9%.

As the COVID-19 pandemic recovery continues, monthly prison intake shows a clear trend upward. It is anticipated that intake of both new court commitments and probation violators will continue to increase to their pre-pandemic trend levels and then continue to follow the downward trend seen prior to the pandemic. On top of that, an additional 600 commitments to prison are anticipated each for 2022 and 2023 as courts process a backlog of felony court cases (i.e. backlog of over 6,000 cases x 20% prison commitment rate = 1,200 cases).

This projection update thus assumes annual prison admissions will increase until 2019 levels are reached, resulting in a 54.0% increase in 2022, a 4.2% decrease in 2023, and a 13.6% decrease in 2024 when the backlog has been processed.

Paroles

Both the parole grant rate and Parole Board Decisions were down for 2021, resulting in fewer moves to parole for 2021. These declines can be attributed to the significant drop in prison intake and returns to prison for parole violations that occurred in the first year of the COVID-19 pandemic, resulting in a smaller prison population of which 87% of prisoners have not completed their minimum sentence and are not legally eligible for parole consideration.

Assuming the parole grant rate continues at the 2021 level through the projection period results in a small increase in future moves to parole for 2022 and a larger increase in 2023, as some of the intake backlog becomes parole eligible, followed by a slow decrease thereafter as intake resumes its decline.

Parole Revocations

Parole violators returned with new sentences (PVNS) increased by 45% from 2020, but is still below pre-pandemic levels (14.8% below 2019). This increase was mitigated by a decrease in parole violator technical (PVT) returns to prison, which declined for a 5th consecutive year in 2021.

Parole revocations are related to the number of paroles that occur. The decrease in the number of paroles in 2021 is expected to produce fewer new parole revocations in 2022. Additionally, the Macomb Parole Violation Unit will help mitigate the number of PVT returns to prison going forward. Thus, PVT returns to prison are expected to decrease in 2022 and then remain fairly stable through the remainder of the projection period.

On the other hand, PVNS cases are expected to continue increasing through 2024 and then stabilize. This is attributed to COVID-19 pandemic recovery within the court system, as court operations continue moving towards normalcy, and process a backlog of court cases.

Implications for the New Prison Population Forecast

Given the above discussion regarding assumptions, it is projected the prison population will rebound slightly through 2022, up about 700 prisoners, mostly due to processing the court backlog, then stay fairly stable in 2023, and then continue the previous decline through the remainder of the projection period.

Again, keep in mind this baseline projection makes no assumptions about future changes in criminal justice statutes, policies or practices that would further affect the size of the prison population.

It should be remembered that the prison population projection is not expected to be precisely on-target from one month to the next, but rather will be expected to see the actual population alternately curving under and over the projection line periodically during the course of time, to even out the month-to-month fluctuations in favor of the longer-term trend.

PRISON POPULATION PROJECTIONS

The following chart summarizes the revised and extended baseline prison population projections through calendar year 2026. Table 1 (quarterly) and Table 2 (monthly) show the figures corresponding to the projection line in the chart.

Michigan Department of Corrections
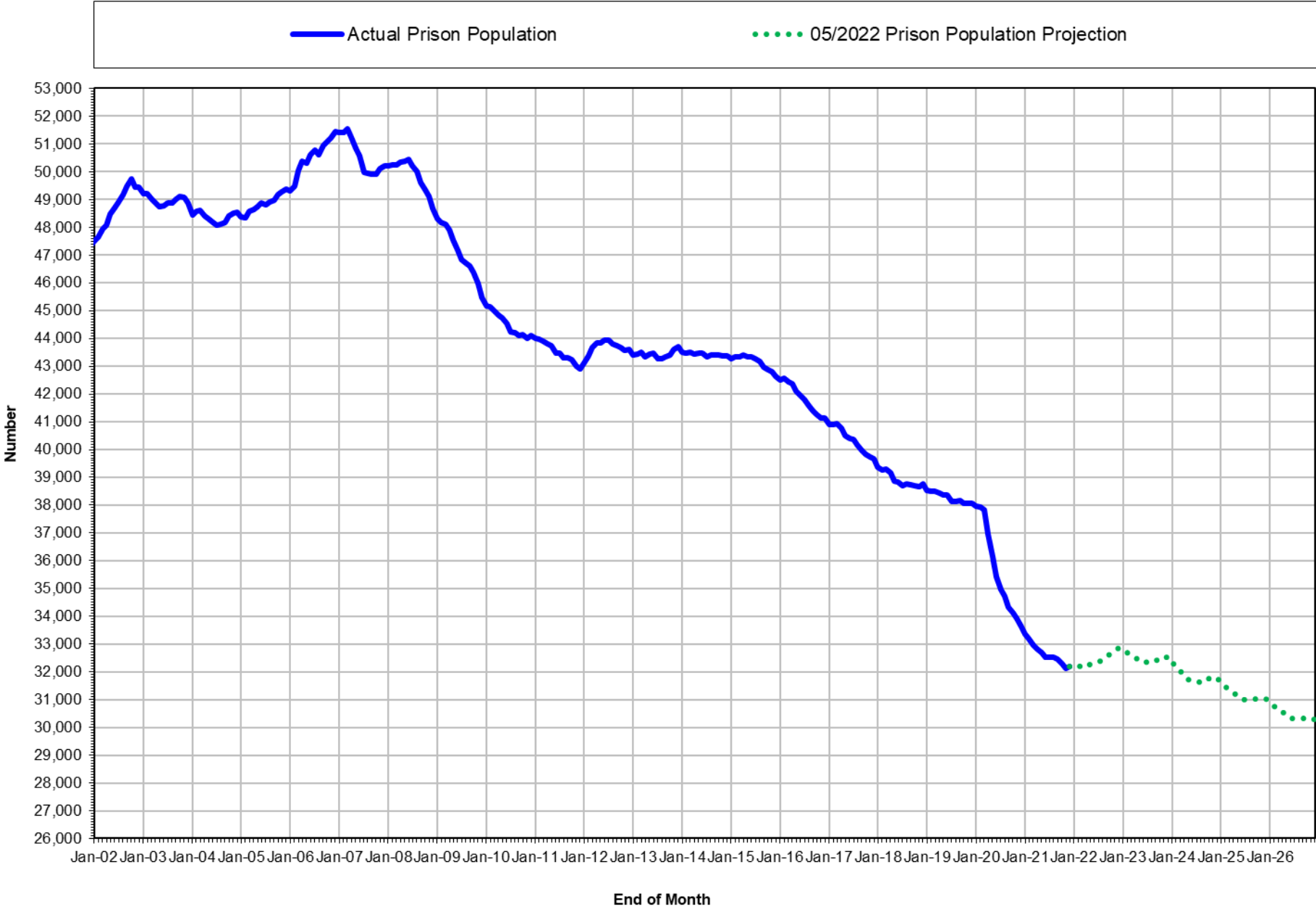## ACTUAL AND PROJECTED PRISON POPULATION

Legend:
- Actual Prison Population
- 05/2022 Prison Population Projection

Y-axis: Number (26,000 to 53,000)

X-axis: End of Month (Jan-02 through Jan-26)

	Table 1	
Prison Population Projection		
May 2022		
End of Month	Projected Prisoner Population	Yearly Change
Mar-22	32,253	
Jun-22	32,279	
Sep-22	32,527	
Dec-22	32,869	683
Mar-23	32,608	
Jun-23	32,310	
Sep-23	32,402	
Dec-23	32,558	-311
Mar-24	32,035	
Jun-24	31,647	
Sep-24	31,629	
Dec-24	31,786	-772
Mar-25	31,395	
Jun-25	31,016	
Sep-25	31,012	
Dec-25	31,015	-771
Mar-26	30,636	
Jun-26	30,336	
Sep-26	30,323	
Dec-26	30,298	-717

Table 2		
Prison Population Projection		
May 2022		
End of Month	Projected Prisoner Population	Yearly Change
Jan-22	32,215	
Feb-22	32,148	
Mar-22	32,253	
Apr-22	32,310	
May-22	32,270	
Jun-22	32,279	
Jul-22	32,356	
Aug-22	32,425	
Sep-22	32,527	
Oct-22	32,690	
Nov-22	32,772	
Dec-22	32,869	683
Jan-23	32,816	
Feb-23	32,687	
Mar-23	32,608	
Apr-23	32,529	
May-23	32,393	
Jun-23	32,310	
Jul-23	32,362	
Aug-23	32,411	
Sep-23	32,402	
Oct-23	32,500	
Nov-23	32,463	
Dec-23	32,558	-311
Jan-24	32,364	
Feb-24	32,137	
Mar-24	32,035	
Apr-24	31,926	
May-24	31,733	
Jun-24	31,647	
Jul-24	31,641	
Aug-24	31,609	
Sep-24	31,629	
Oct-24	31,759	
Nov-24	31,737	
Dec-24	31,786	-772
Jan-25	31,635	
Feb-25	31,463	
Mar-25	31,395	
Apr-25	31,270	
May-25	31,130	
Jun-25	31,016	
Jul-25	31,004	
Aug-25	31,020	
Sep-25	31,012	
Oct-25	31,025	
Nov-25	30,998	
Dec-25	31,015	-771
Jan-26	30,921	
Feb-26	30,760	
Mar-26	30,636	
Apr-26	30,575	
May-26	30,432	
Jun-26	30,336	
Jul-26	30,312	
Aug-26	30,323	
Sep-26	30,323	
Oct-26	30,357	
Nov-26	30,305	
Dec-26	30,298	-717