Andy Beshear
Governor

John T. Hicks
State Budget Director

December 3, 2021

The Honorable Christian McDaniel, Co-Chairman
The Honorable Jason Petrie, Co-Chairman
Interim Joint Committee on Appropriations and Revenue
Legislative Research Commission
Capitol Annex
Frankfort, Kentucky 40601

Dear Senator McDaniel, Representative Petrie, and Members of the Committee:

Attached is a report outlining the inmate population forecast for FY 2021-22 through FY 2023-24, as required by the Executive Branch budget bill.

Let me know if you have any questions or need further information.

Sincerely,

John T. Hicks
State Budget Director

Attachment

Inmate Population Forecast – FY 2022 – FY 2024

Overview

The inmate population forecast is the result of a consensus process between the Office of State Budget Director (OSBD), the Department of Corrections, and members of the Justice Cabinet.

The Department of Corrections provides OSBD with the historical, raw data files for the admission, release, and stock populations for previous fiscal years. In addition, the parole hearing files and the resulting outcomes for the previous fiscal years are provided for those inmates having a parole hearing.

Utilizing the data files, OSBD constructs a model describing the characteristics of the current inmate population. The characteristics of key importance are: type of crime, length of sentence, time until a parole hearing, time served, jail or parole credit, and the probability of the parole hearing outcome. These characteristics allow for the modeling of the current inmate population and the expected time until release for the current population.

The final component of the forecast is the forecasted number of new inmates and the associated characteristics of the new inmates. The resulting forecasted admissions are expected to be distributed among crime types and have similar overall characteristics of the more recent historical data.

The finalized projections from OSBD were presented to the Department of Corrections, and a consensus process between the Department of Corrections and the Office of State Budget Director was used to determine the final forecast of the inmate population projections. Based on their extensive experience and programmatic knowledge, the Department of Corrections finalized the population forecast taking into consideration the continued effectiveness of the parole supervision credit, and alternative sentencing programs.

Inmate Population Forecast – FY 2022 – FY 2024 – Average Daily Population

Month	FY 2022	FY 2023	FY 2024
July	18,206	18,735	19,471
August	18,294	18,794	19,550
September	18,377	18,975	19,636
October	18,457	19,028	19,595
November	18,619	19,180	19,487
December	18,572	19,330	19,433
January	18,513	19,159	19,357
February	18,592	19,014	19,546
March	18,640	19,127	19,603
April	18,619	19,328	19,646
May	18,622	19,393	19,767
June	18,750	19,425	19,838

Key Assumptions

- **COVID-19 caused changes and fluctuations in numerous statistics and key measures that are used in estimating the felon population. However, the changes were not statistically, significantly different in most cases that would warrant deviating from the practice of using the recent, average trends as the base assumptions in the forecast.**

COVID-19 impacted law enforcement, the courts, and the Department of Corrections in numerous ways. The overall mix of admission and crime types varied by fiscal year, as can be seen in the charts below:

Admission Type - By FY

FY	New Commitment		Returned from Supervision		Probation Revocation		Returned from MRS		Other		Total	
2019	7290	36.30%	6421	32.00%	4763	23.70%	1300	6.50%	291	1.50%	20065	100.00%
2020	5830	36.10%	4936	30.60%	3942	24.40%	1117	6.90%	311	1.90%	16136	100.00%
2021	3887	32.50%	3809	31.80%	3289	27.50%	796	6.60%	189	1.60%	11970	100.00%
2022	927	39.80%	693	29.80%	545	23.40%	127	5.50%	35	1.50%	2327	100.00%
Total	17934	35.50%	15859	31.40%	12539	24.80%	3340	6.60%	826	1.60%	50498	100.00%

Crime Type - By FY

FY	Drug		Property		Other_Public		Other Violent		Other		Violent		Sex		Total	
2019	8181	40.80%	5742	28.60%	1867	9.30%	1437	7.20%	1449	7.20%	920	4.60%	438	2.20%	20065	100.00%
2020	6689	41.50%	4539	28.10%	1529	9.50%	1177	7.30%	1124	7.00%	644	4.00%	416	2.60%	16136	100.00%
2021	4930	41.20%	3081	25.70%	1204	10.10%	1071	8.90%	819	6.80%	481	4.00%	362	3.00%	11970	100.00%
2022	889	38.20%	586	25.20%	218	9.40%	232	10.00%	147	6.30%	91	3.90%	78	3.40%	2327	100.00%
Total	20689	41.00%	13948	27.60%	4818	9.50%	3917	7.80%	3539	7.00%	2136	4.20%	1294	2.60%	50498	100.00%

The overall mix of release types and the average length of stay was also impacted by COVID-19, even without the the commutations that occurred during the early months of the pandemic.

Release Type - By FY

FY	Paroled		Release		Discharged		MRS		Other	
2019	5363	27.40%	5129	26.20%	4680	23.90%	4186	21.40%	212	1.10%
2020	4677	23.50%	4575	23.00%	4420	22.20%	4564	22.90%	239	1.20%
2021	4170	30.30%	2864	20.80%	2608	18.90%	3433	24.90%	160	1.20%
2022	619	28.70%	447	20.70%	557	25.80%	507	23.50%	27	1.30%
Total	14829	26.80%	13015	23.50%	12265	22.10%	12690	22.90%	638	1.20%

Length of Stay (Months) - By Crime

FY	Drug	Property	Other Public	Other Violent	Other	Violent	Sex
2019	9.08	10.96	10.42	15.44	8.32	49.31	63.98
2020	9.54	11.72	12.22	15.93	8.33	58.31	61.64
2021	12.06	15.9	14.63	20.48	11.7	68.02	64.3
2022	11.54	14.48	15.02	17.74	8.56	73.56	67.16
Total	10.07	12.51	12.34	17.13	9.11	58.95	63.47

However, after extensive discussion with the Department of Corrections and members of the Justice and Public Safety Cabinet, the consensus decision was made

to utilize the overall, historical trends. The impacts of COVID-19 were viewed by the programmatic experts as not being indicative of future trends in the felon population.

- **A key assumption in the inmate population forecast is the continuation of the parole grant rate and actions of the parole board.**
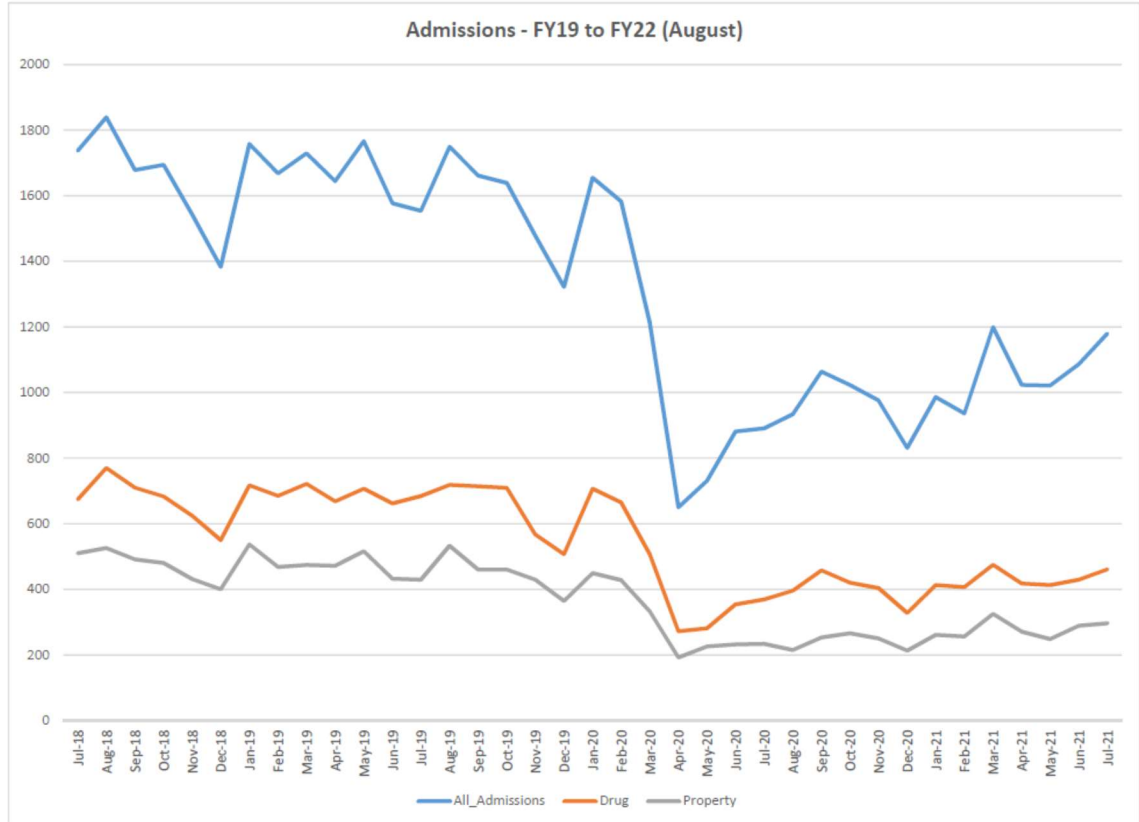
One of the most significant variables effecting the inmate population in the Commonwealth is the actions of the parole board. The parole board has three choices when hearing an inmate's case: grant parole, defer to the next hearing, or order the inmate to complete their sentence. The current base history period of FY19-FY21 has seen an overall decline in the granting of parole, as average grant rate has fallen below 40% across all crime types. During FY 16-17, the overall grant rate had risen to approximately 53% from the average of 48% in FY 15-16, significantly lower than the 61% grant rate observed in FY 14-15. The direct result of a reduced parole grant rate is a significant increase in the size of the stock population. The current, consensus forecast assumes an overall parole grant rate of 39.9%. The forecast uses specific grant rate assumptions for each crime type, and the recent historical average was used for each major crime type:

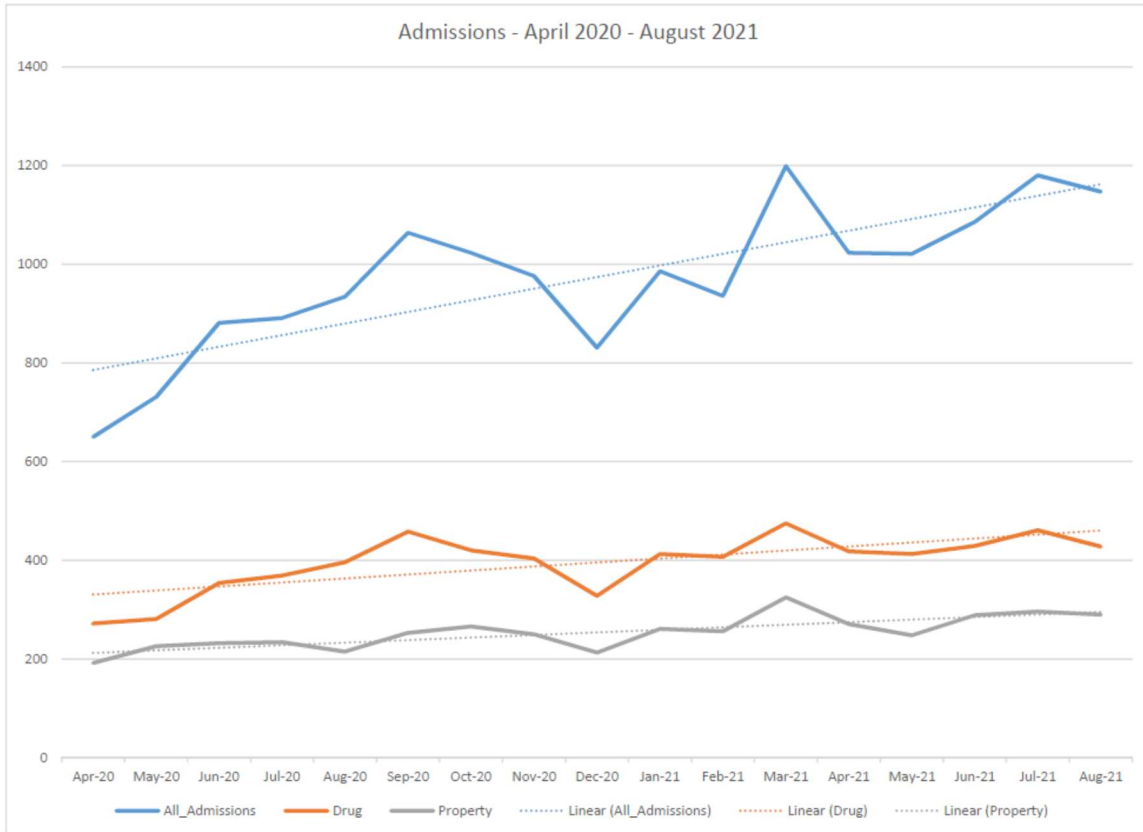| Crime Type	Grant Rate
Drug	46.3%
Property	41.5%
Public Order	32.4%
Violent	30.8%
Other Violent	20.1%
Sex	19.0%

- **A key assumption in the inmate population forecast is the forecasted admissions across crime types.**

The inmate population forecast is composed of six crime types, utilizing the Department of Corrections classification of Kentucky Penal Codes into the categories of: Drug, Property, Violent, Sex Offence, Other Property, and Other Violent Crimes. These groups are further classified into New Commitments, Probation Revocations, Returned from Supervision, and Returned from Mandatory Release Supervision (MRS).
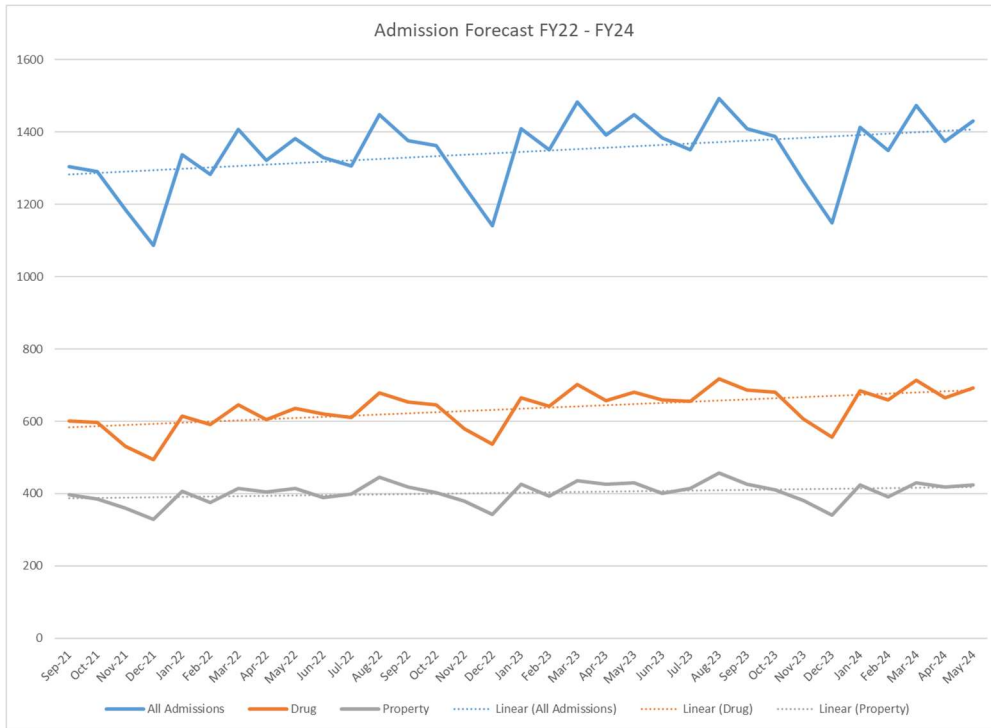
The overall number of admissions had been declining before the COVID-19 pandemic began. However, overall admissions declined significantly as the pandemic began in March/April of 2020. The data for all admissions and the category of drug and property crimes is graphed below:

Admissions - FY19 to FY22 (August)

Since April, 2020, admissions have been increasing, as the criminal justice system returns to normal. However, it would be incorrect to assume that the recent growth rates in admissions will continue over the full time period of the forecast. As can be seen by the trend lines in the graph below, allowing for the current trends to be used in the forecast would result in a significant overestimation of the felon population.

Admissions - April 2020 - August 2021

Using a combination of time series analysis, economic variables, and in consultation with the Department of Corrections and the Justice and Public Safety Cabinet, the forecasted admissions reflect compound annual growth rates that assume more tempered growth in the later fiscal years.

Admission Forecast FY22 - FY24

Additional Assumptions

- Admissions will occur on a uniform nature across the days of the month, and the average individual admission in a month results in approximately a 0.5 Average Daily Population per month.

- Releases will occur primarily in the first 7-10 calendar days of each month, and the average individual release in a month results in approximately 0.25 ADP per month.