

OAHU COMMUNITY CORRECTIONAL CENTER POPULATION FORECAST FINAL REPORT

August 2, 2021



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EXECUTIVE SUMMARY

Executive Summary

The Oahu Community Correctional Center (OCCC) is operated by the State of Hawaii Department of Public Safety (PSD). It is the largest jail in the state, housing primarily pre-trial detainees as well as a significant component of male sentenced felons who are receiving pre-release programming either within OCCC or the nearby Laumaka pre-release facility. Historically, OCCC's population has consistently outstripped its design capacity of 628 beds and its operational capacity of 954 beds. In addition to overcrowding concerns, much of the current facility was constructed in the 1980s, is obsolete, and no longer meets the needs of the State. Due to the current facility's many challenges, PSD is working to comply with the legislative mandate to plan for a new OCCC in accordance with Act 122, SLH 2014 and Act 124, SLH 2016. The purpose of this report is to communicate the results of a large-scale, comprehensive examination of the OCCC population as well as a series of statistical forecasts of future bed demand to assist with facility planning.

The OCCC population has the dynamics of both a prison and a large county jail and as such, there are challenges in forecasting the population using traditional means. In addition, the accuracy of population forecasting is greatly influenced by changes in public policy, law enforcement strategies, socioeconomic factors, and a host of other factors. To avoid producing a population forecast that may have a short shelf life, the consultant team utilized the best performing statistical models to produce a baseline forecast as well as a second 'what if' scenario which could guide decision-making in case of unforeseen changes in crime rates, law enforcement practices, or policies of the courts. The margin of error for the new forecasts is approximately plus/minus 5% by the year 2032.

In general, the best predictor of a correctional facility's future population pattern is its past pattern. Data were analyzed for OCCC's average daily population (ADP) for each month starting from January 2015. Median criminal court processing time, projected Honolulu City/County population growth, and the prior history of the OCCC population were included as predictor variables in the model. The forecast includes both male and female inmates (although females currently held at OCCC will be housed in the future at the Women's CCC in Kailua) with the re-entry population the subject of a separate forecast.

The modeling has produced a forecast that shows a slow decrease in the OCCC male population with an ADP of 875 inmates in 2024 and 788 inmates in 2032 with seasonal peaks and valleys occurring during each year of the forecast. Although there is considerable uncertainty as to what a 'return to normal' in Hawaii's criminal justice system may look like following the current pandemic, the forecast assumes a return to prior criminal justice system dynamics by the start of 2022. It is quite possible that OCCC, over the short-term, will experience a rebound during which the population exceeds the forecast until court backlogs are reduced.

Although OCCC's average daily population is projected to be 788 individuals in 2032, the pre-pandemic ADP was 1,316 in 2019. There are two factors that need to be applied to the forecast to arrive at a total bed requirement:

- Peaking Factor – reflects the daily and seasonal variations in jail occupancy and the temporary unavailability of beds due to unanticipated circumstances, routine repairs and maintenance, etc. and,
- Classification Factor – reflects the need to separate the population based on security requirements, treatment needs, etc.

To determine the peaking factor, OCCC's daily population between 2015 and July 2020 was compared to the ADP. Doing so revealed fluctuations (population peaks) during any day to be 5% greater than the ADP.

Not all beds are always available for use by every inmate. For instance, a vacant bed in a community security housing unit cannot be filled with a medium security detainee, a maximum security detainee cannot be placed in a vacant bed in a minimum security housing unit, etc. The classification factor is, in effect, an acknowledgement of this reality of operating a jail. Based on an analysis of classification data, a classification factor of 10.6% has been applied to the forecast. It is also important to note that no jail should be operating at 100% capacity. The peaking and classification factors help contribute to providing the necessary cushion to operate a jail safely and effectively at 85% to 90% of its maximum bed capacity.

The table below represents the projected OCCC bed needs (for male detainees only) through 2032 and includes application of the peaking and classification factors. Thus, with a projected ADP of 875 in 2024, the actual detention bed need becomes 1,012 declining to 911 by 2032.

Year	Males			
	ADP	Peaking (5%)	Classification (10.6%)	Total Bed Need
2024	875	44	93	1,012
2026	853	43	90	986
2028	831	42	88	960
2030	809	40	86	935
2032	788	39	84	911

Housing the re-entry population on Oahu has long been constrained by capacity limitations at the Waiawa Correctional Facility and Module 20 at OCCC. Simply put, the number of candidates for the re-entry program exceed the number of available beds. In order to properly forecast the re-entry population, the number of sentenced felons with community or minimum classifications at both OCCC and the Waiawa Correctional Facility were analyzed. The forecast shows a small but sustained decline in the re-entry population over time. The peaking factor for this population was slightly higher (8.5%) due to large-group prison transfers which create periodic high fluctuations to the ADP. Because the inmates in question all share the same classification level, there was no need to calculate a classification factor. The table below provides the bed needs for the male re-entry

population only.

Year	Males		
	ADP	Peaking (8.5%)	Bed Need
2024	362	31	393
2026	354	30	384
2028	346	29	375
2030	338	29	367
2032	330	28	358

Combining the ADP numbers for the male detainee and re-entry populations, the forecast predicts a total OCCC bed need of 1,405 in the near term (2024) declining to 1,269 in 2032.

Year	OCCC (Males)				Pre-Release			Grand Total Bed Need
	ADP	Peaking (5%)	Class. (10.6%)	OCCC Bed Need	ADP	Peaking (8.5%)	Pre-Release Bed Need	
2024	875	44	93	1,012	362	31	393	1,405
2026	853	43	90	986	354	30	384	1,370
2028	831	42	88	960	346	29	375	1,336
2030	809	40	86	935	338	29	367	1,302
2032	788	39	84	911	330	28	358	1,269

The analysis found that the OCCC population was beginning to decline before the onset of the pandemic in early 2020. Once the criminal justice system returns to normal functions, it is expected that the OCCC population dynamics will return to 2019 conditions and resume its long-term gradual decline.

The analysis also indicated that there are opportunities to reduce the OCCC average daily population. Using a combination of offense, case status, and classification data, the findings suggest that there are four main segments of the population that may be reduced, ultimately resulting in a possible ADP reduction of 235 based on 2019 data.

Population Segment	Number
Pretrial Felons	40
Probation Violators	138
Sentenced Felon Probationers	39
Pretrial Misdemeanants	18
Total	235

In conclusion, there are a number of strategies that could accomplish this ADP reduction. For example, the Hawaii legislature considered legislation to reduce or eliminate monetary bail (SB1260). Although SB1260 has been tabled for the 2021 legislative session, such policy changes are steps toward reducing future OCCC populations by diverting defendants from detention in OCCC. Future public policy initiatives may also address certain low-level non-violent felonies as well as technical probation violations as additional measures to divert individuals from detention in OCCC. While the landscape remains unclear regarding what changes in policies and practices will become permanent fixtures of Hawaii's criminal justice system going forward, unless significant population reduction measures are implemented, the new OCCC will still be a large facility housing a large detention and re-entry population.

Accordingly, while the bed need in 2024, assuming no legislative, corrections policy or criminal justice changes, is projected at 1,012 beds for OCCC and 393 for pre-release including the 96 bed Laumaka facility, those numbers are expected to decline by 2032 to 911 and 358 beds respectively. The number of new beds to be constructed as recommended during the master plan process in 2016-18 was 1,044 new rated OCCC beds; with planned pre-release housing planned for 288 new rated beds. The current bed projections are in-line with the master plan recommendations for both OCCC and pre-release for the year 2024.

OCCC POPULATION ANALYSIS

Oahu Community Correctional Center

The Oahu Community Correctional Center is operated by the State of Hawaii Department of Public Safety. It is the largest jail in the state, housing primarily pre-trial detainees as well as a significant component of male sentenced felons who are receiving pre-release programming either within OCCC or the nearby Laumaka pre-release facility. Historically, OCCC's population has consistently outstripped its design capacity of 628 beds and its operational capacity of 954 beds. In addition to overcrowding concerns, much of the current facility was constructed in the 1980s, is obsolete, and no longer meets the needs of the State. Due to the current facility's many challenges, PSD is working to comply with the legislative mandate to plan for a new OCCC in accordance with Act 122, SLH 2014 and Act 124, SLH 2016. The purpose of this report is to communicate the results of a large-scale, comprehensive examination of the OCCC population as well as a series of statistical forecasts of future bed demand to assist with facility planning.

OCCC Population Analysis

Any correctional facility's population is dictated by two forces: The number of people committed to custody (admissions/bookings) and how long each of those commitments stays in custody (Average Length of Stay, or ALOS). The focus of this population analysis is on how the jail's average daily population is impacted by bookings and ALOS between 2014 and Spring 2021. We are basing our analyses on the assigned count rather than the headcount for the facility. The assigned count reflects all inmates assigned to OCCC regardless of where they are ultimately housed, while the headcount is the actual count at the OCCC facility proper.

Data Sources

The data for this analysis was generated through two main sources. First, PSD fully cooperated by transmitting multiple comprehensive data extracts containing a host of variables at the charge level for every inmate in the Hawaii system through the end of February 2021. Second, the Hawaii State Judiciary provided similar data extracts containing every single court filing between 2018 and November 2020. The files from the various files were linked in order to construct a database that ultimately contained tens of millions of points of measurement. This allowed the Pulitzer/Bogard research team the opportunity to reconstruct the OCCC population within the criminal justice system for each day during the study time period.

Demographic Characteristics

In order to provide some context to understanding the OCCC's population dynamics it is useful to briefly examine the demographic composition of the facility's population. Figure 1 below provides the racial breakdown of the jail's assigned average daily population for each full year during the analysis.

Figure 1: OCCC Assigned Inmates By Race

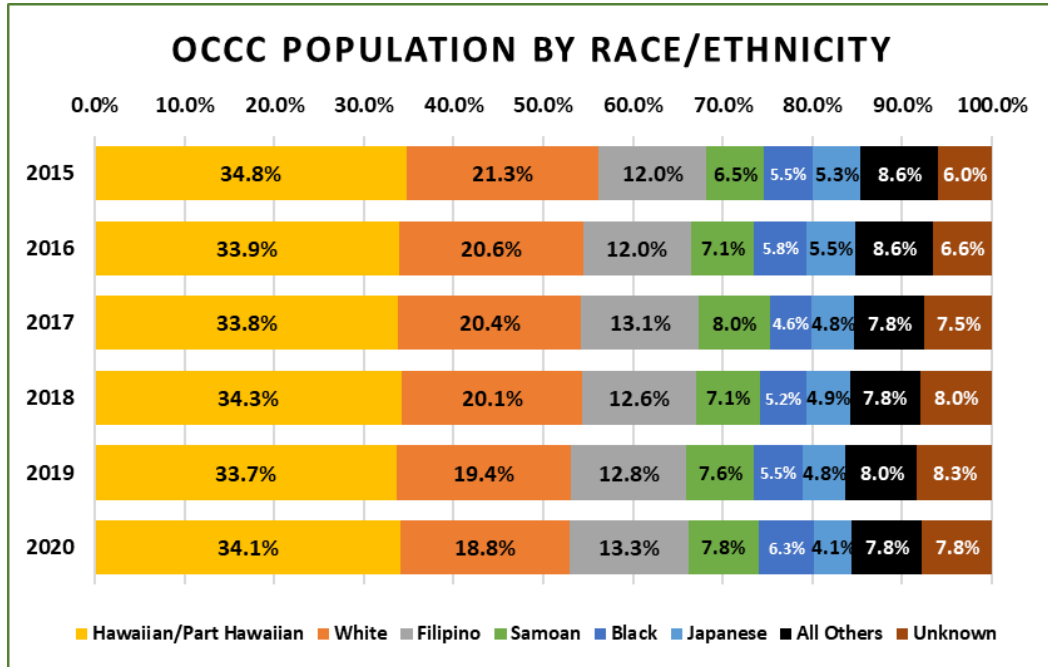


Figure 2 gives the ADP breakdown by gender from 2010 - 2020. The female proportion in the population grew steadily from 2010 until the end of 2016, but has shrunk in the time since.

Figure 2: OCCC Assigned Inmates By Gender

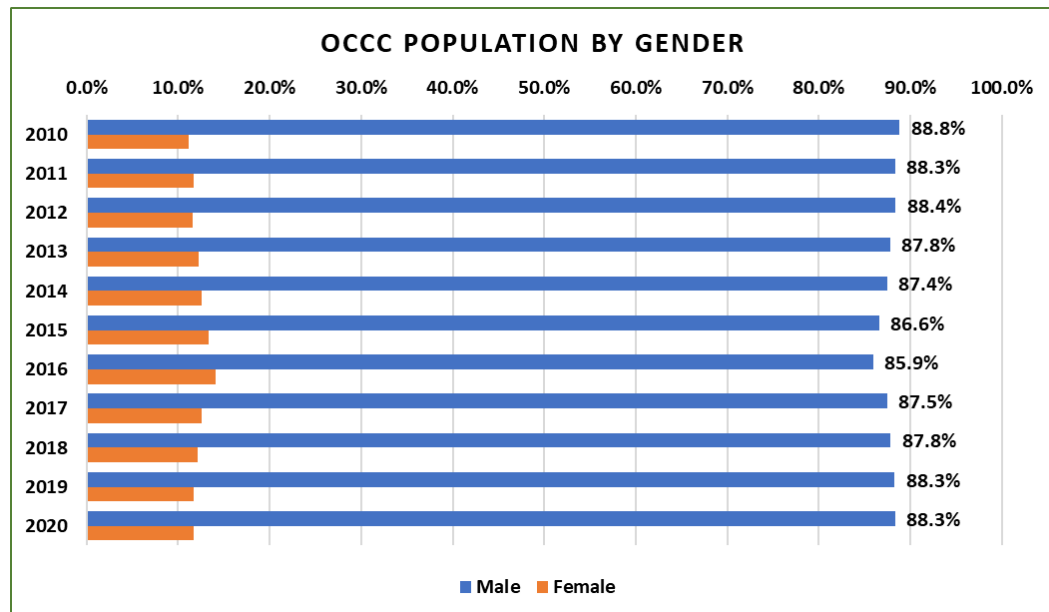


Figure 3 shows the age of inmates at booking between 2015 and 2020. Nationally we have noted shifts in correctional populations by age such that the youngest cohort of inmates is shrinking relative to inmates in their 30s. However, we do not see this dynamic in the OCCC

data. We do note an increase in the proportion of inmates who are over 50 years of age.

Figure 3: OCCC County Inmates By Age At Booking, 2014 - 2019

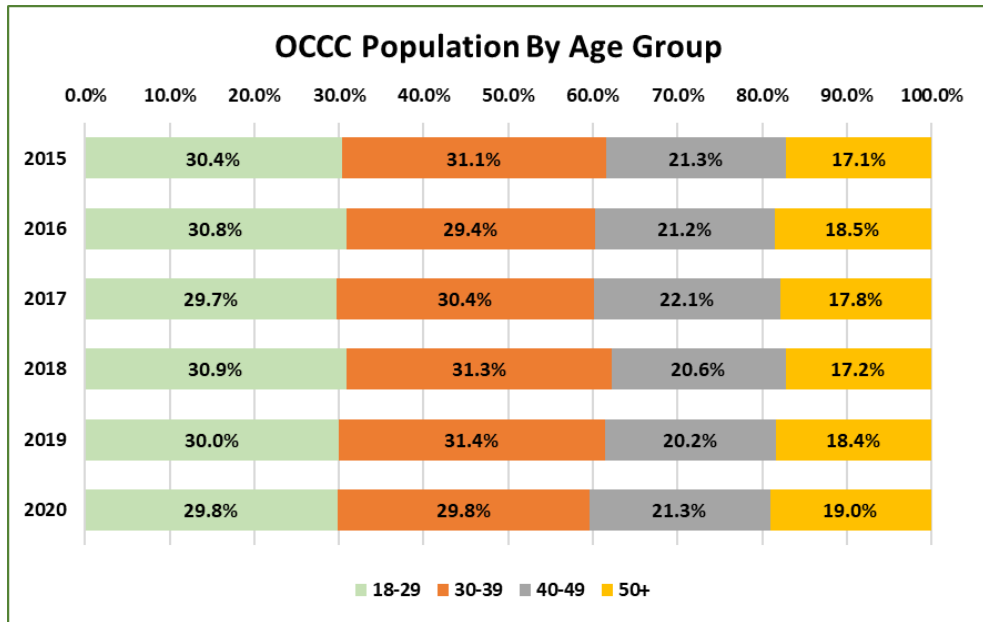
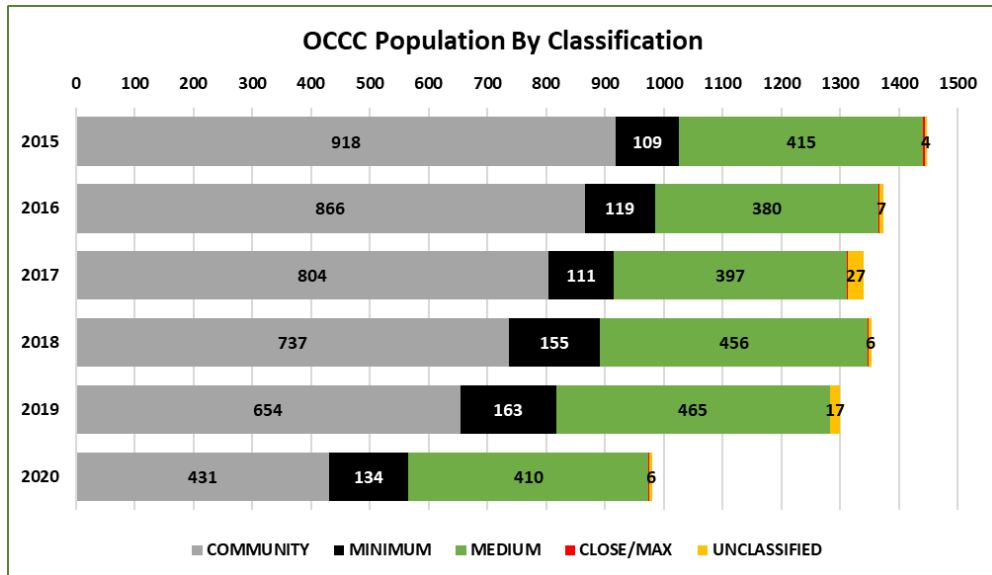


Figure 4 looks at the assigned average daily inmate population by classification level. The population has gradually shifted a bit to having proportionally more medium classified inmates than community classified inmates. To be clear, our analyses includes the inmates housed at both Laumaka and Module 20 who are classified as community custody, which are part of the OCCC inmate population count. This has the effect of increasing the proportion of community classified inmates as compared to the headcount population. In 2015, the community classified inmates comprised just over 63% of the population, with medium nearly 29%. By the end of 2020, community inmates comprised approximately 44% of the population while medium inmates were nearly 42% of the population. The minimum classification population during that time went from almost 8% to nearly 14%.

Figure 4: OCCC Assigned Inmates By Classification Level



To be clear, community classification is the lowest/least serious custody level. As such, these inmates represent the lowest institutional safety threat. Between 2015 and 2019, community classified inmates constituted just over 58% of the population. This proportion is much higher than what we typically encounter in facilities across the nation. Generally, a community classification designation means that the individual in question could be a potential candidate for release into the community and supervised there rather than remaining detained.

We further analyzed the data by running some basic logic against the primary charge information that was contained in the PSD data extracts in order to categorize the offense levels within the population.

An inmate can be held in custody, pretrial or sentenced, for one or more charges. The primary charge for which a person is held is referred to as “primary charge category” and includes the following major categories (presented in order of seriousness):

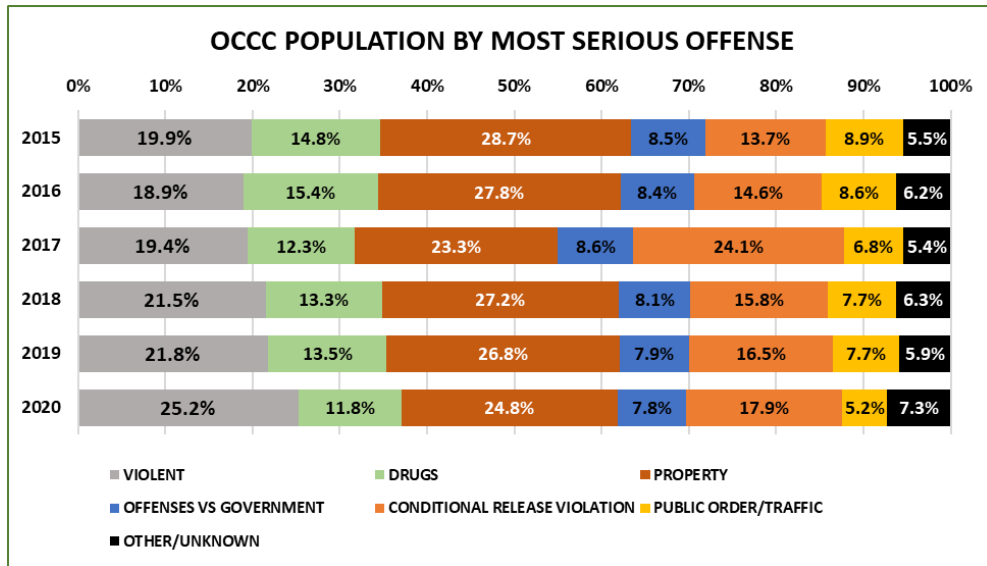
- Violent
- Drugs
- Property
- Offenses Against the Administration of Government
- Public Order/Traffic
- Conditional Release Violation
- Other

‘Offenses Against the Administration of Government’ is defined as crimes such as Failures to Appear or Resisting Arrest. ‘Property’ includes offenses such as burglary or theft and fraud. ‘Public Order’ offenses include things like Vandalism or Disorderly Conduct.

Figure 5 below examines the percentage of ADP occupied by each of the charge categories

across time. The chart is sorted by our logic for which crimes are the most serious.

Figure 5: OCCC Assigned Inmates By Most Serious Offense



Average Daily Population Trend

The average daily population (ADP) of a correctional facility is simply the average number of inmates held on each day during a particular time period. Overall, the OCCC ADP trend during the time period studied shows a gradual decline (Figure 6). The two lines on the chart reflect the fact that, due to overcrowding issues, a number of inmates assigned to OCCC were sent to the Federal Detention Center prior to the pandemic. Thus, the assigned count reflects all inmates assigned to OCCC regardless of where they are ultimately housed, while the headcount is the actual count at the OCCC facility proper. The onset of the pandemic resulted in a reduction in inmates assigned to OCCC, ultimately meaning that the beds at the Federal Detention Center have not been used again as of this writing. Another takeaway from Figure 6 is that the OCCC population trend is seasonal, with reductions in the population taking place generally in late December/early January of each year.

Figure 6: OCCC Average Daily Population, 2010 - 2021

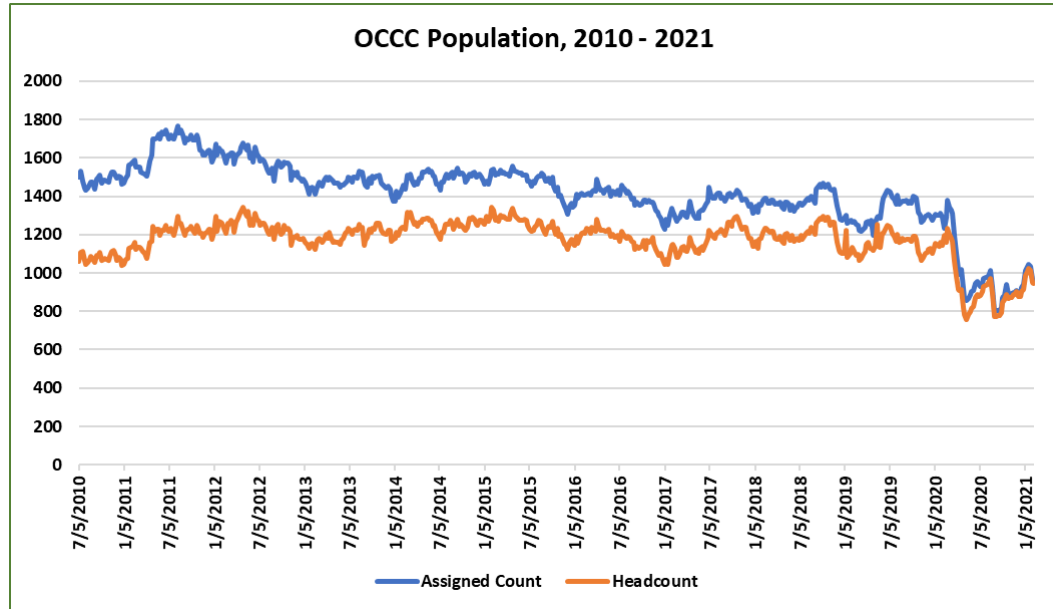


Table 1 provides the annual ADP numbers for the OCCC facility for the last 11 full years. The population in 2019, the last non-pandemic year, dropped 20% from what it was in 2011. Acknowledging that 2011 may have been an outlier year, the decrease from 2010 to 2019 is 11.1%.

Table 1: Average Annual Daily Population, 2010 - 2020

Year	ADP	% Change
2010	1484	
2011	1644	10.8%
2012	1583	-3.7%
2013	1470	-7.1%
2014	1491	1.4%
2015	1476	-1.0%
2016	1395	-5.5%
2017	1351	-3.2%
2018	1373	1.6%
2019	1309	-4.1%
2020	1012	-23.1%

Case Status & Offense Level Trends

Table 2 (below) depicts the OCCC population by case status and offense level for the year 2019, the last 'normal' pre-pandemic year. The OCCC facility houses inmates with serious criminal charges, with roughly 64% of the population during 2019 facing at least one felony charge. Pretrial detainees (people who do not have a sentence on any single charge) constituted over 39% of the jail's population. Pretrial felons are the largest component of

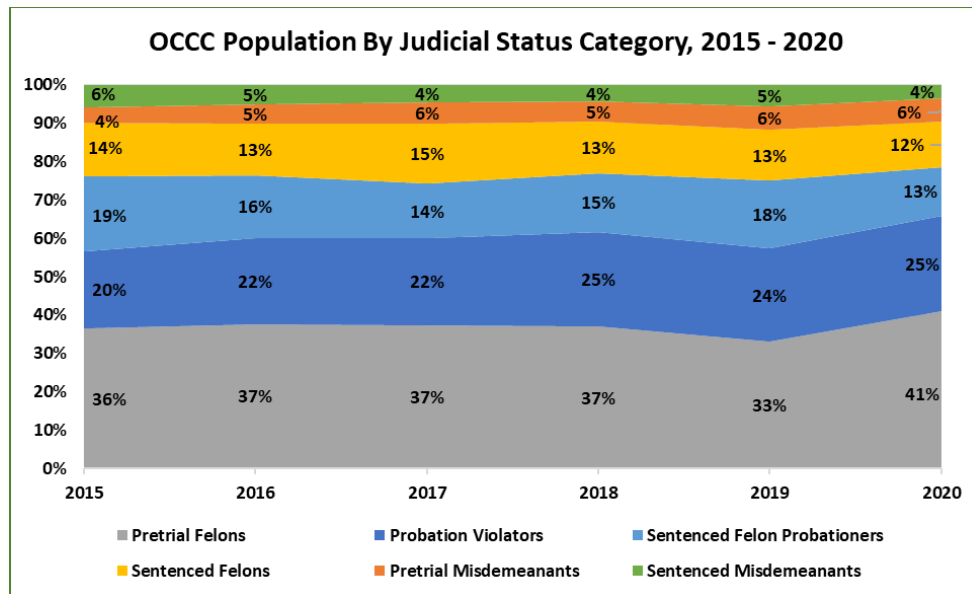
the population.

Table 2: Annual ADP By Judicial Status & Offense Level, 2019

Status	Males		Females		Total	
	ADP	%	ADP	%	ADP	%
Pretrial Felons	377	29%	56	4%	433	33%
Probation Violators	268	21%	47	4%	315	24%
Sentenced Felon Probationers	208	16%	26	2%	233	18%
Sentenced Felons	170	13%	0	0%	170	13%
Pretrial Misdemeanants	66	5%	15	1%	82	6%
Sentenced Misdemeanants	64	5%	7	1%	71	5%
Parole Violators	3	0%	0	0%	3	0%
Others	2	0%	1	0%	3	0%
Total	1156	88%	152	12%	1309	100%

Figure 7 shows the trends over time with the judicial status and offense level composition of the OCCC population. The composition of the population along these lines is remarkably stable up until the pandemic, when we see an increase in the proportion of pretrial felons and a reduction in sentenced felon probationers, most likely due to a reduction of in-person court hearings.

Figure 7: OCCC Population By Judicial Status, 2015 - 2020



In order to fully understand the OCCC facility’s population dynamics, we elected to undertake a deeper dive into the larger categories within the population to examine trends, charges, and classification levels. It should be noted that while our numbers and figures using population counts and frequencies run through February 2021, our drill down analyses conclude at the end of 2020, the last full year of our data.

Pretrial Felons

Pretrial felons comprise the largest portion of the OCCC population. As Figure 8 depicts, this population has gradually been decreasing since at least 2015 (the start of our raw data extract). Compared to 2015, the population of pretrial felons in 2019 was 17.3% lower. It is interesting to note that this population was impacted by the pandemic, but recovered to 2019 levels by late 2020.

Figure 8: OCCC Pretrial Felons, 2015 - 2021

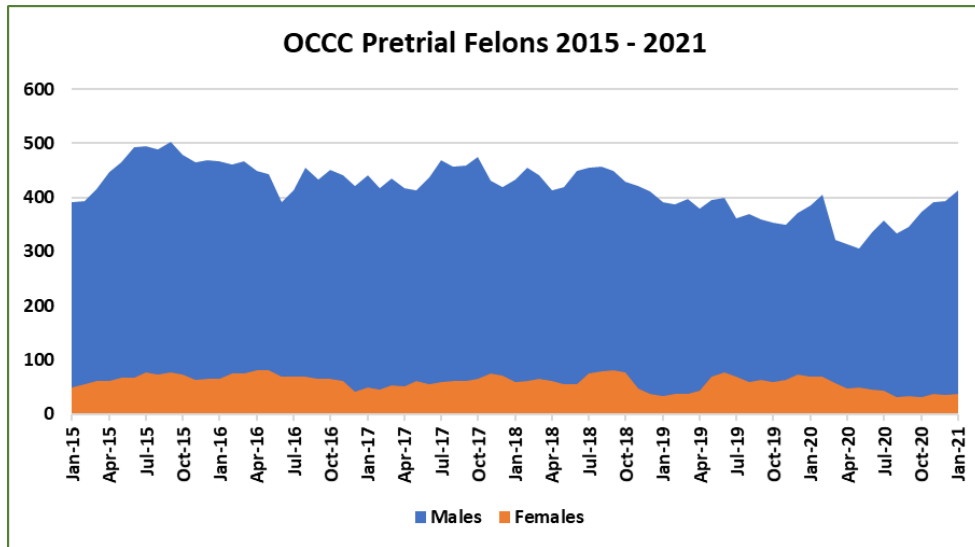
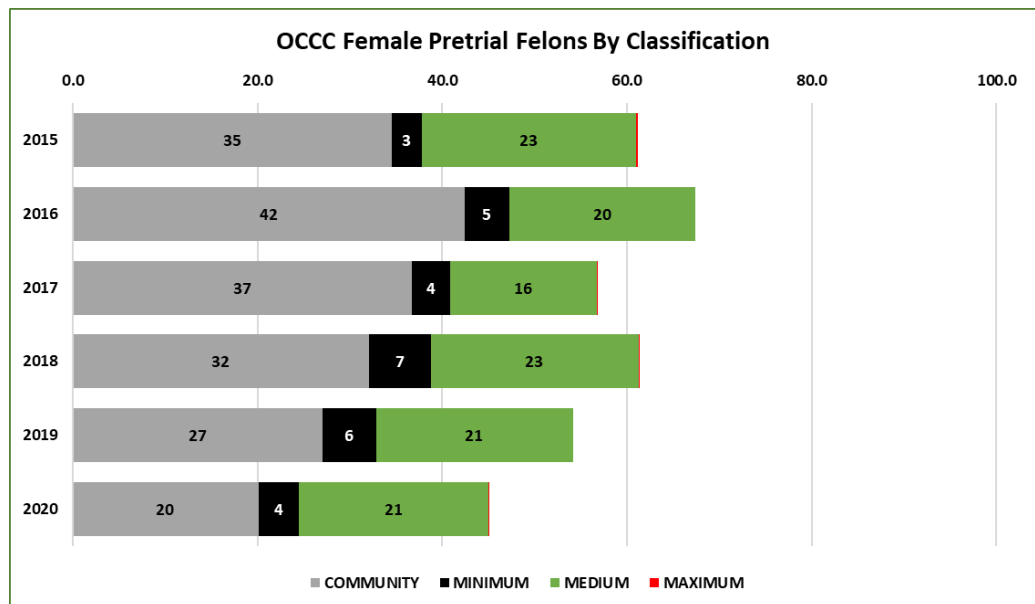


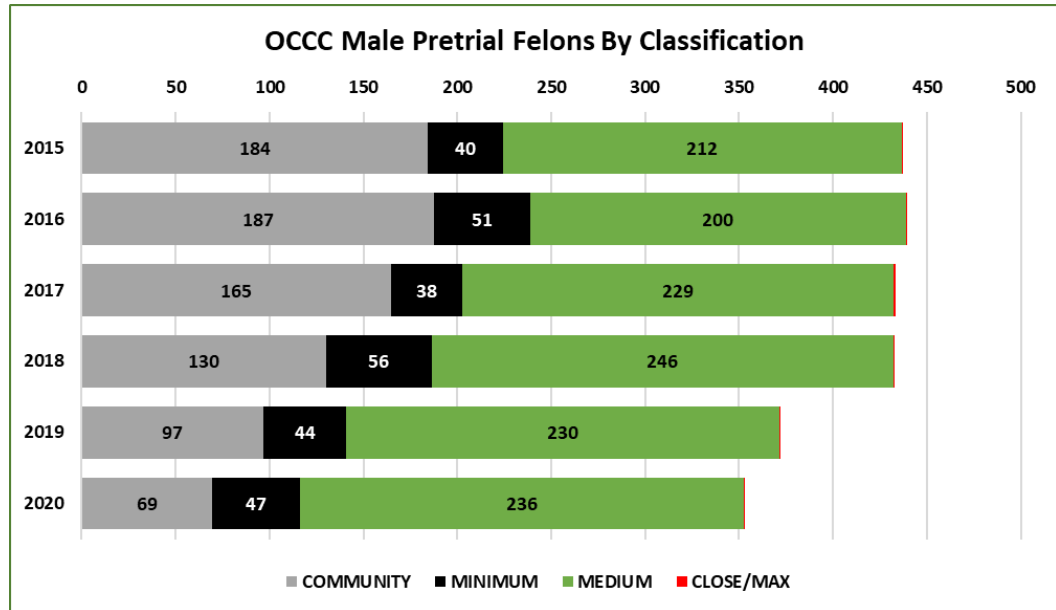
Figure 9 examines the female pretrial felons by their classification level. The numbers in Figure 9 represent average daily populations for each group per year. Similar to what we saw with the whole population classification breakdown, there is a proportional shift away from community classification, even pre-Covid, toward medium and minimum classification.

Figure 9: Classification of Female OCCC Pretrial Felons, 2015 - 2020



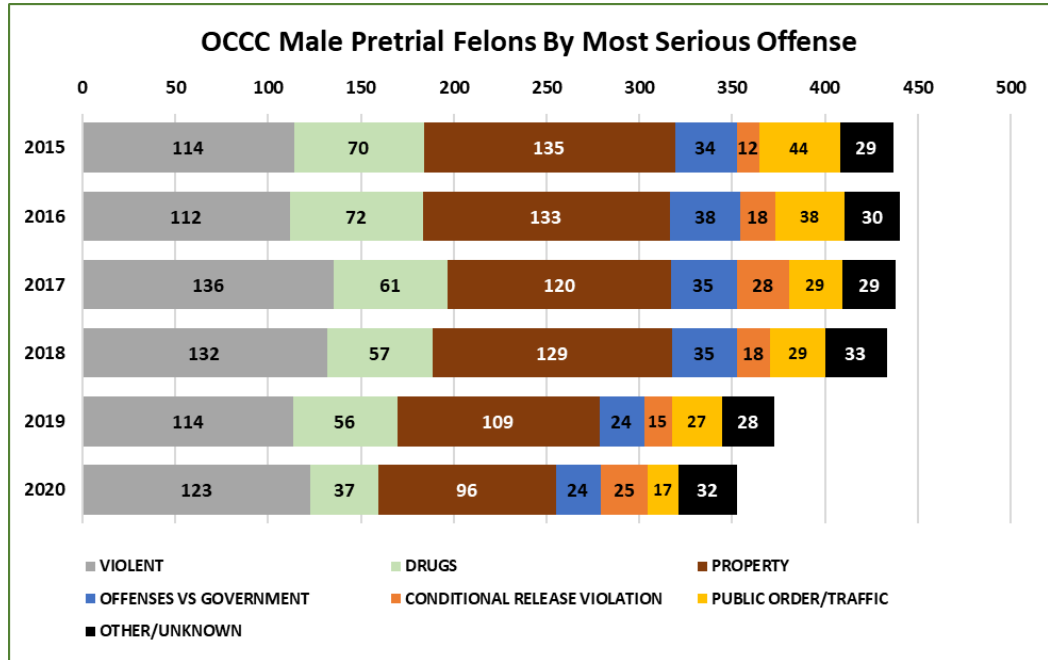
Meanwhile, the classification levels for the male pretrial felons are presented in Figure 10. There is a significant reduction in the community classified group, again even in pre-COVID times, and an increase in the medium custody group. Between 2015 and 2019, the four year average percentage of male pretrial felons who were community classified was nearly 36%. Again, the community classification implies that there are members in this group of inmates who are likely suitable for supervision in the community rather than in detention.

Figure 10: Classification of Male OCCC Pretrial Felons, 2015 - 2020



To provide more context for understanding this portion of the population, we examined the most serious offense of the male pretrial felons. As Figure 11 shows, the two largest groups within this cohort have a most serious offense that is classified as property or violent. As the system responded to the pandemic, we see the property offender group shrink, while the violent offender group actually increases relative to 2019. We would expect this to occur, as systems across the country experienced similar population dynamics during the pandemic. Put simply, it is harder or impossible to justify releasing individuals accused of violent felonies as compared to property or those who are charged with offenses vs. the government.

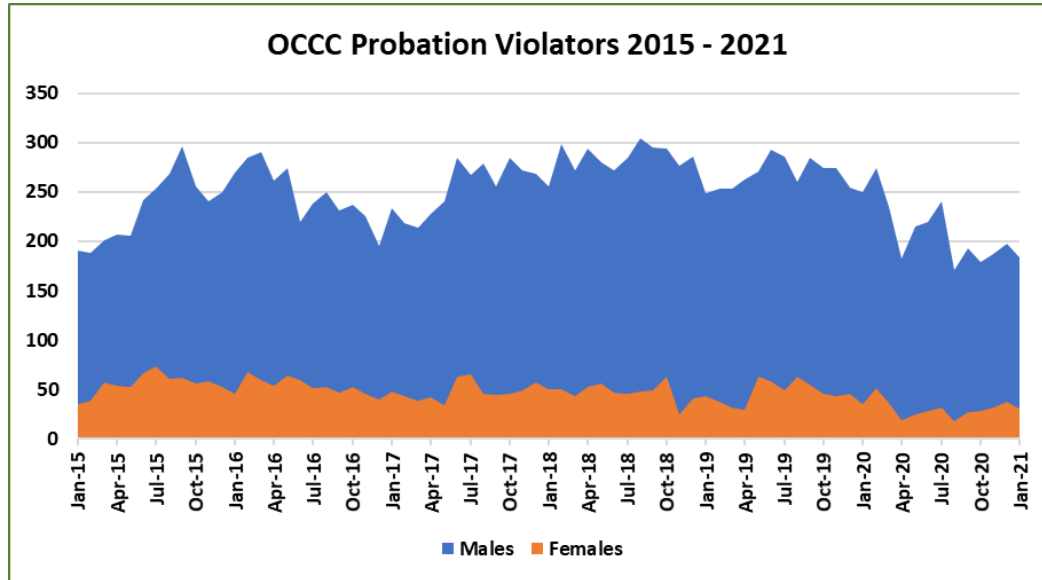
Figure 11: Classification of Male OCCC Pretrial Felons, 2015 - 2020



Probation Violators

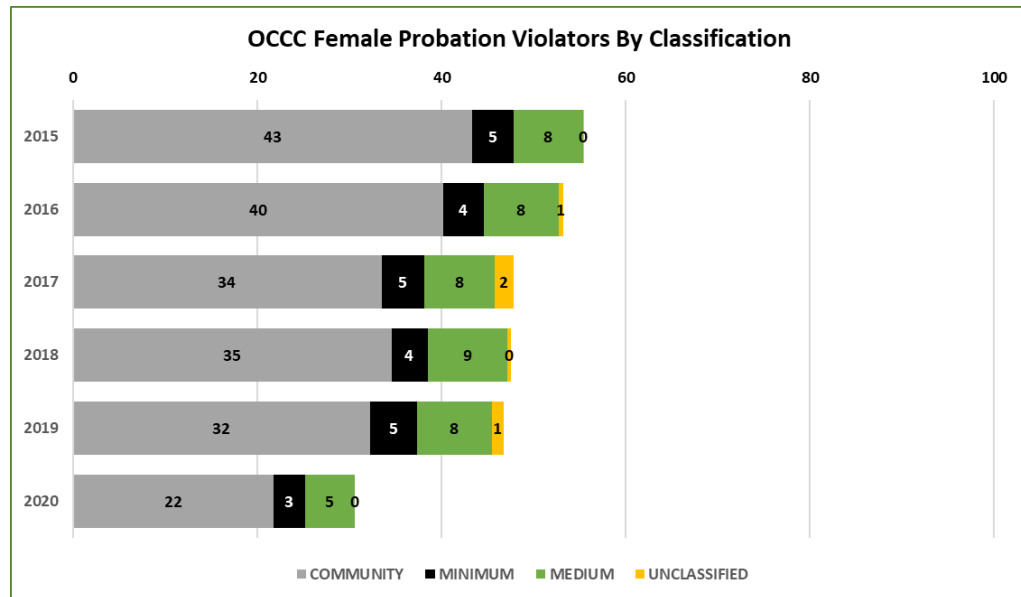
Probation violators are the second largest portion of the OCCC population. To be clear, these are individuals whose most serious charge is a probation violation. Due to the offense logic applied above, the vast majority of these people are charged only with the probation violation, making it all but a certainty that it is safe to conclude that they are detained due to a technical violation. The population trend is depicted in Figure 12. Unlike the overall population (as well as the pretrial felon population), the probation violation population actually increased during 2017, and stayed relatively stable (aside from seasonal variations) until the pandemic began.

Figure 12: OCCC Probation Violators, 2015 - 2021



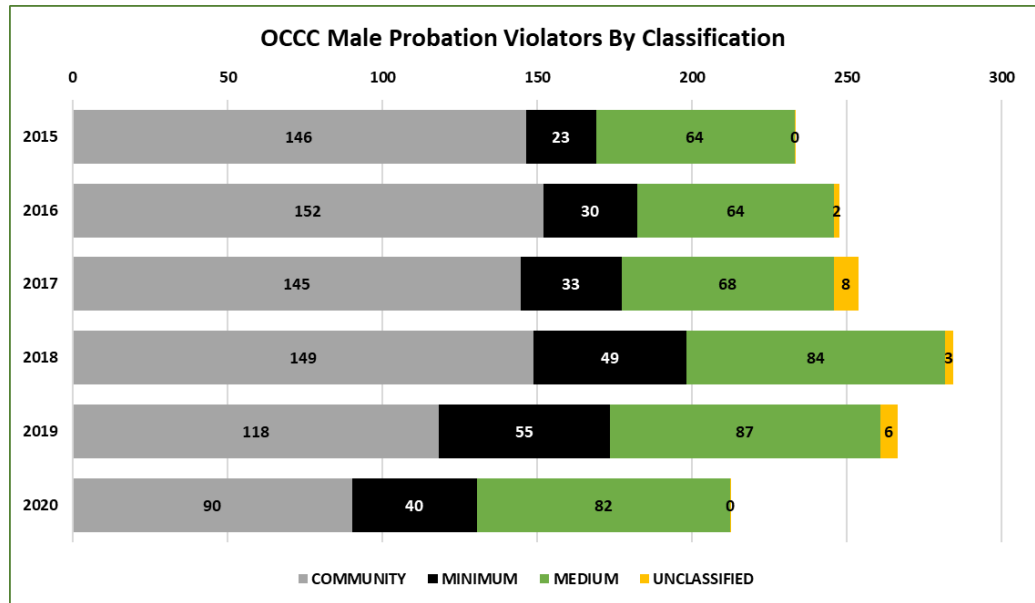
The classification level for the female probation violators group is relatively stable through time (Figure 13) with only a slight reduction in the community classification numbers, excluding the pandemic year of 2020, as compared to the minimum and medium classification groups.

Figure 13: Classification of Female OCCC Probation Violators, 2015 - 2020



The classification levels for male probation violators, however, are much more aligned with the patterns that we have already reviewed. Community classification was at nearly 63% in 2015 and dropped to 44% by 2019, while medium went from 28% to 33% and minimum from 10% to 21% during that same time.

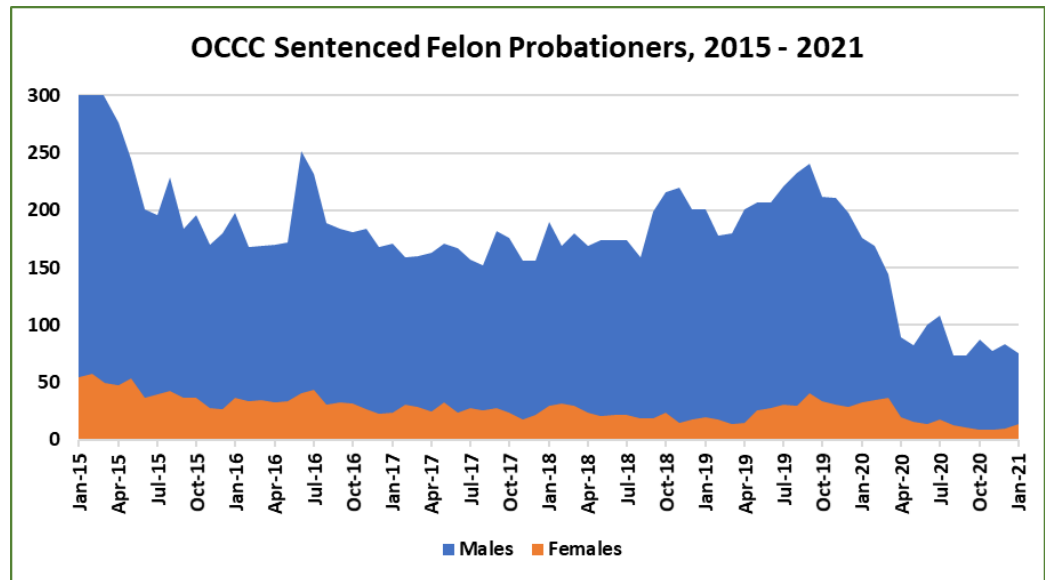
Figure 14: Classification of Male OCCC Probation Violators, 2015 - 2020



Sentenced Felon Probationers

Sentenced felon probationers serve a portion of their sentence in detention and the remainder of the sentence is subsequently served on probation. After 2015, the population of sentenced felon probationers was relatively stable up until mid-year 2019, which was characterized by significant growth. Obviously the pandemic had a significant impact on this portion of the OCCC population (Figure 15).

Figure 15: Sentenced Felon Probationers, 2015 - 2021



Figures 16 and 17 present the classification levels of the male and female sentenced felon probationers. The pattern of shifting away from community classification is quite evident with the male sentenced felon probationers.

Figure 16: Classification of Female Sentenced Felon Probationers, 2015 - 2020

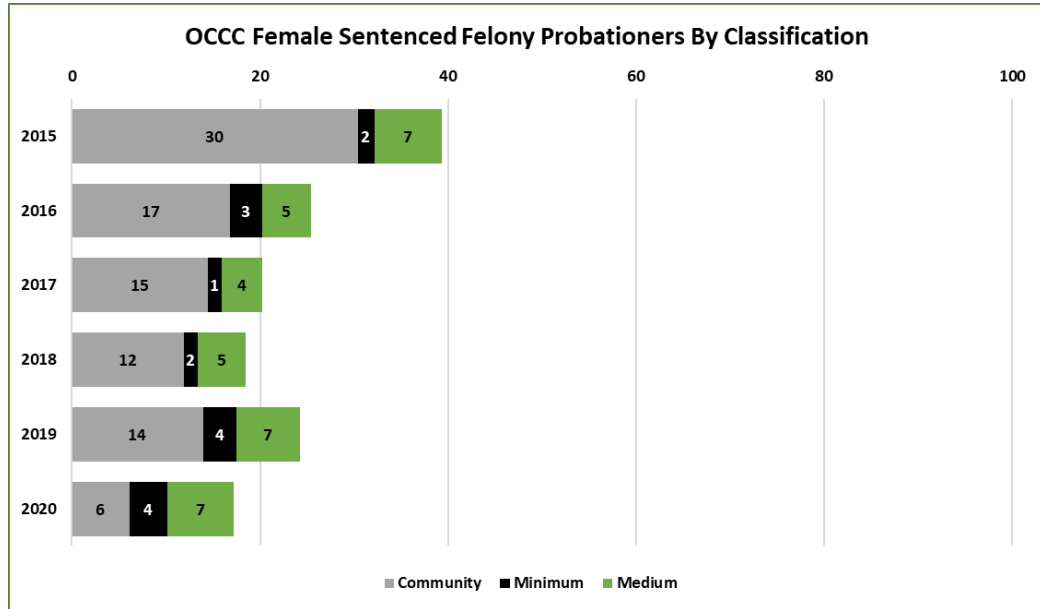
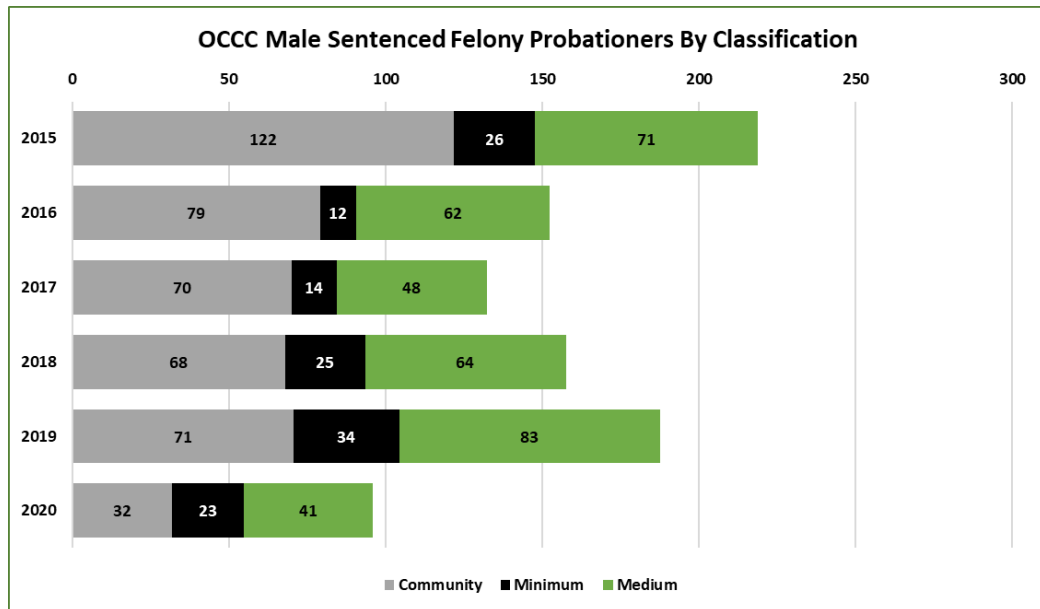
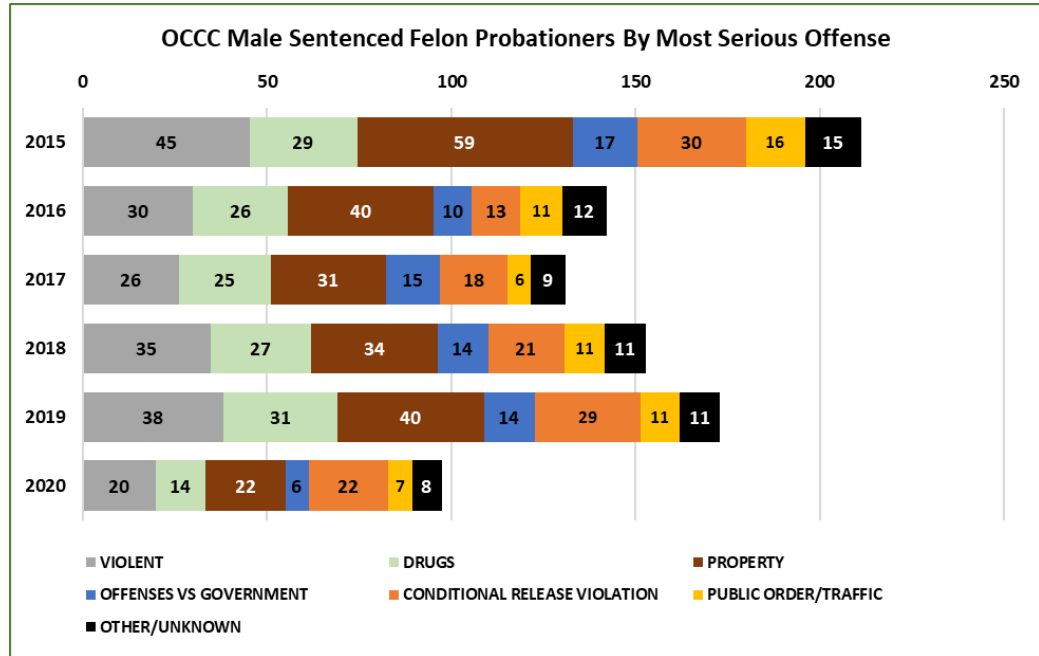


Figure 17: Classification of Male Sentenced Felon Probationers, 2015 - 2020



Meanwhile, Figure 18 provides a view of the male sentenced felon probationers by their most serious offense when they were first sentenced. It is here that the growth in this population during 2019 can be seen, with increases in multiple categories, including conditional release violations themselves. Overall, as expected, this population has a low custody level and the majority of the offense are non-violent in nature.

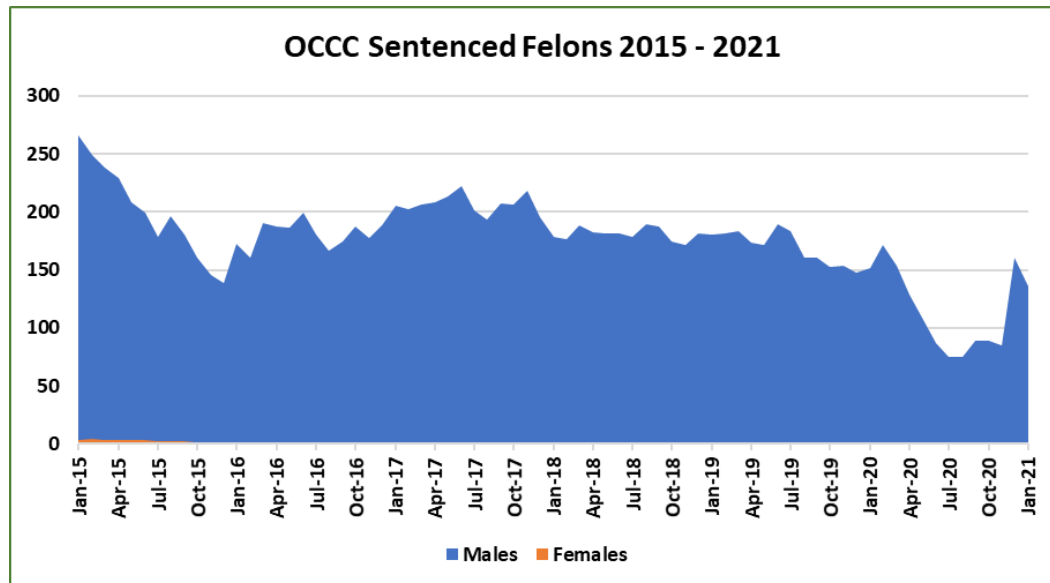
Figure 18: Most Serious Offenses of Male Sentenced Felon Probationers



Sentenced Felons

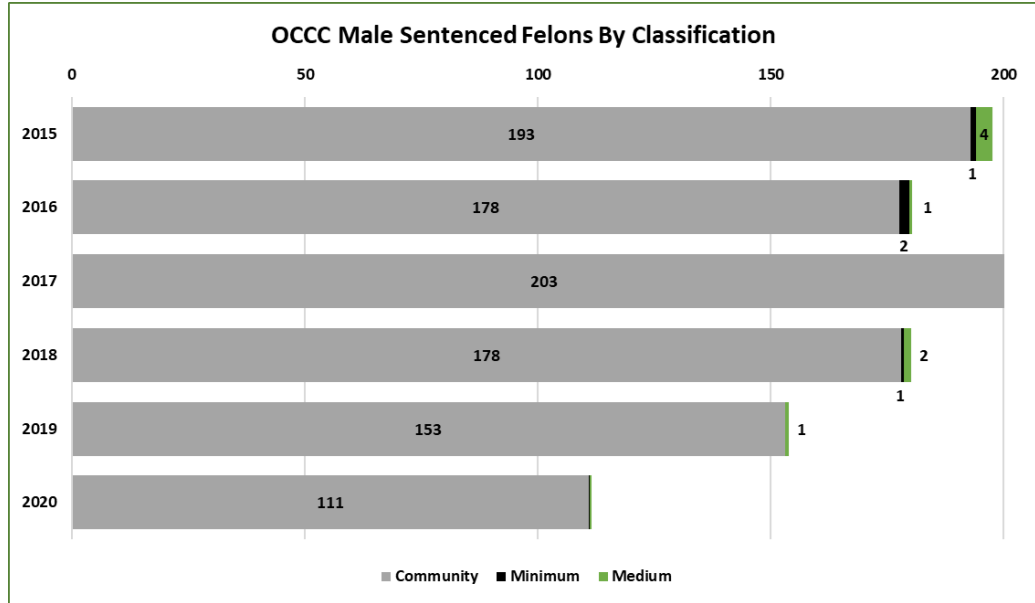
The ADP of the male sentenced felons between 2015 and 2019 was just over 179, comprising 13% of the OCCC population. Because the sentenced misdemeanor population was less than 5%, we did not perform a drill down analysis of that cohort. The vast majority of OCCC sentenced felons are people who are less than a year from their scheduled release and are in a prerelease/transition program. As Figure 19 demonstrates, this population steadily decreased between Spring 2017 and the onset of the pandemic in Spring 2020. The population returned to pre-pandemic levels by early 2021.

Figure 19: OCCC Sentenced Felon Population, 2015 - 2021



As can be seen in Figure 20, the custody level for this group of inmates is almost universally at the community level, which is not a surprise given the nature of their custody status.

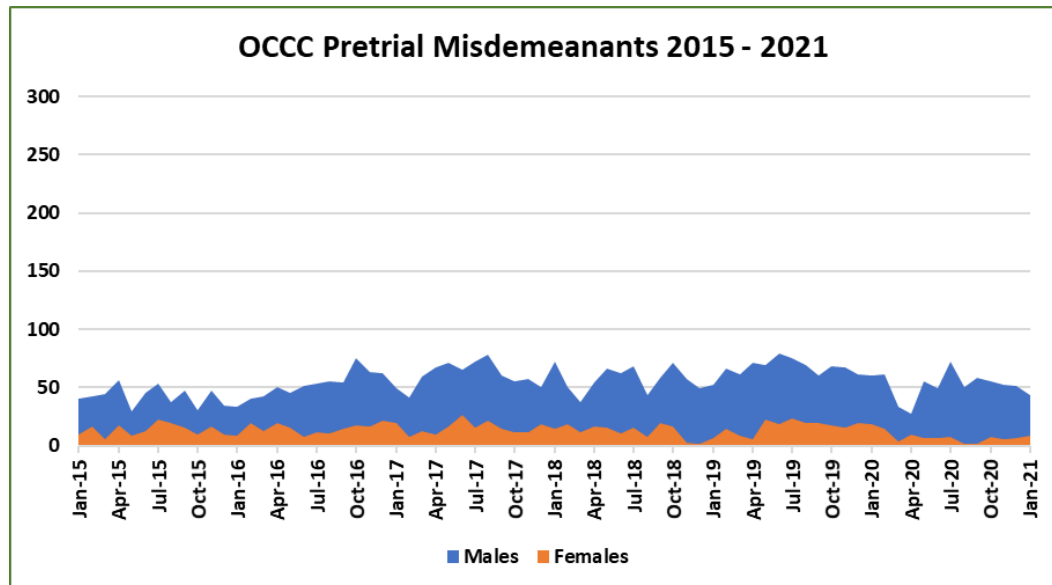
Figure 20: Classification of Male OCCC Sentenced Felon Population, 2015 - 2020



Pretrial Misdemeanants

Pretrial misdemeanants constitute our final judicial status group to review. Between 2015 and 2019, pretrial misdemeanants accounted for 6.5% of the OCCC ADP. The number of these individuals in the OCCC average daily population has stayed relatively steady and rebounded in the Summer from the pandemic. A portion of this rebound is likely due to compliance violations in connection to COVID-19-related mandates. However, there is no real long-term sustained increasing or decreasing trend to the population (Figure 21).

Figure 21: OCCC Pretrial Misdemeanant Population, 2015 - 2021



Figures 22 and 23 show the (expected) overwhelmingly low classification levels of both female and male pretrial misdemeanants.

Figure 22: Classification of Female OCCC Pretrial Misdemeanant Population

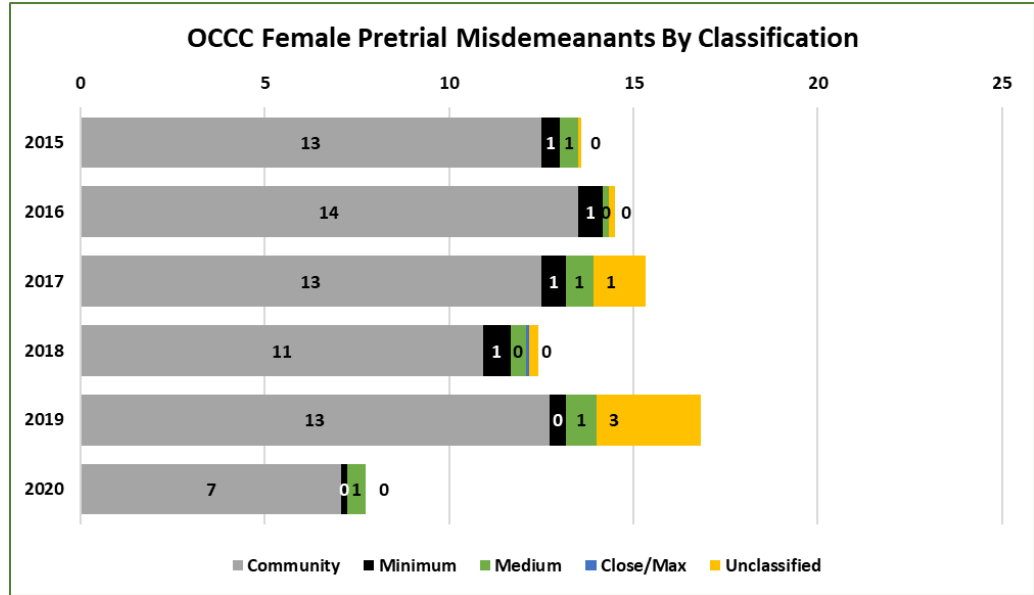
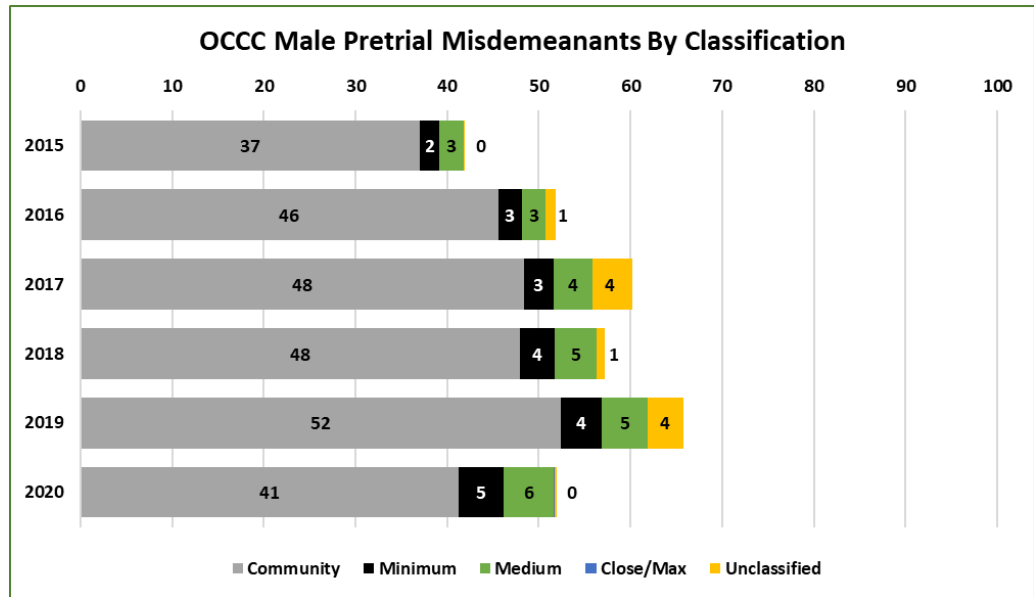


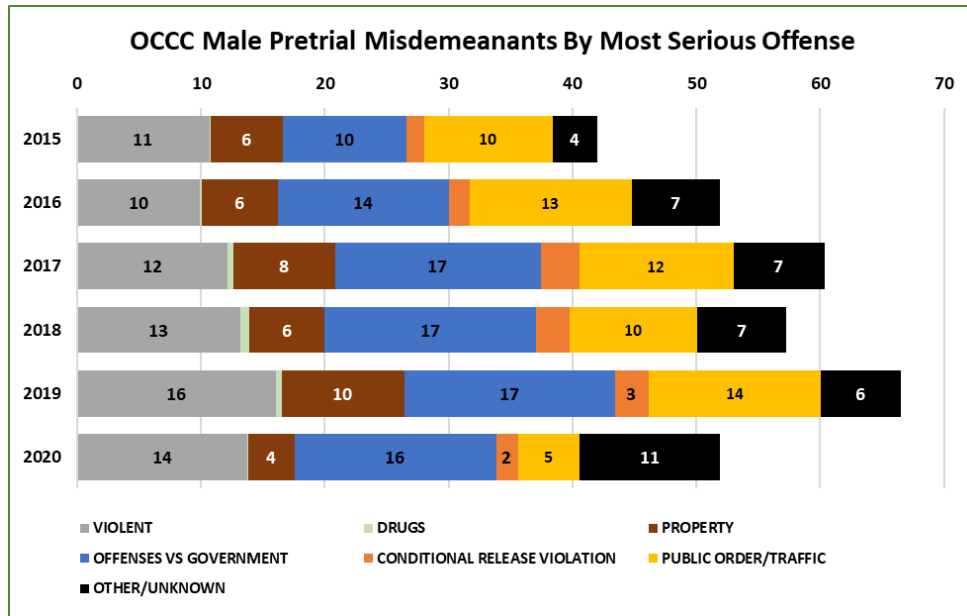
Figure 23: Classification of Male OCCC Pretrial Misdemeanant Population



Drilling down into the male pretrial misdemeanant population (Figure 24), we see that the largest portion of these inmates have ‘Offenses vs Government’ as their most serious offense. This offense typically includes resisting arrest, contempt of court, obstructing justice/law enforcement, fleeing/eluding, etc. Violent offenses come next in terms of frequency. It is also not surprising to see a larger group of inmates with ‘Public Order/Traffic’ offenses within the pretrial misdemeanant population. Inmates with an offense falling into the ‘Other’ category are typically held for extradition matters or liability for the conduct of

another person.

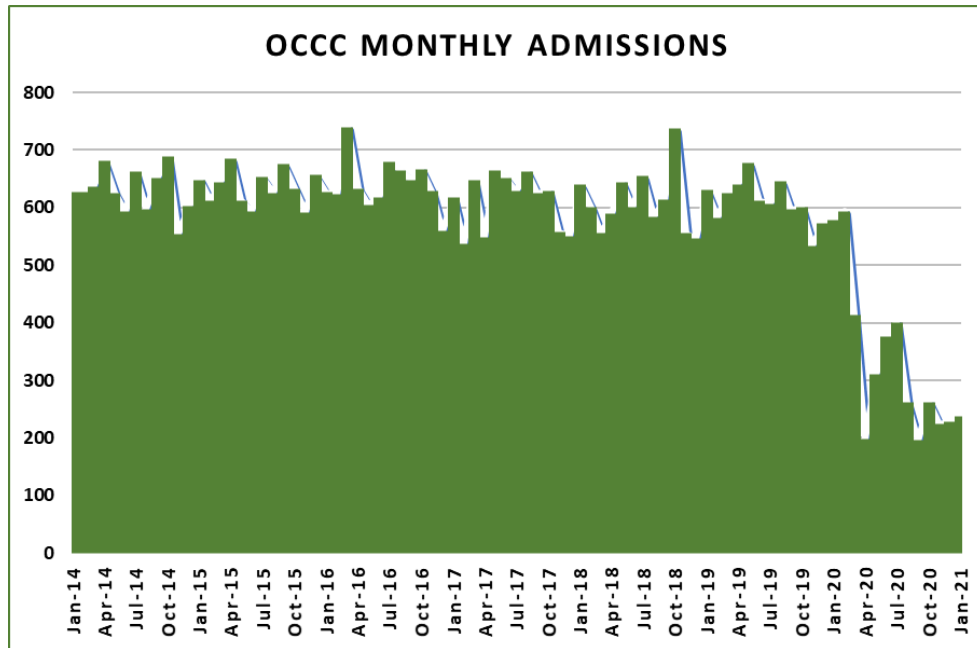
Figure 24: Offenses of Male OCCC Pretrial Misdemeanant Population



Admissions Trends

The number of admissions to a correctional facility is a key measure and indicator of population dynamics. Figure 25 presents the monthly number of individuals admitted to OCCC between 2014 and 2019. OCCC admissions were nearly identical for 2017, 2018, and 2019 and are only slightly below where they had been in 2014, 2015 and 2016. The impact of the pandemic on the trend is quite clear, with admissions falling below 200 in both April and September of 2020.

Figure 25: OCCC Monthly Admissions, 2014 - 2021



Average Length of Stay Trend

In addition to admissions, how long inmates stay is a major driver of a facility’s population. The Average Length of Stay (ALOS) is defined as the total number of days on average an inmate is incarcerated from commitment into the facility until release from the facility. While there are multiple methods for calculating or estimating ALOS, in our experience the most precise way of developing the number is to simply take the lengths of stay for every person released in a given time period and then taking the mean average.

However, it must be noted again that the unique nature of the OCCC population makes it difficult to apply traditional population dynamics to this facility. This is because there are a wide variety of population types in the facility ranging from shorter stay pretrial misdemeanants to longer-staying sentenced felons. Moreover, the distribution of stay lengths within the population renders a mean average at best deceptive. Instead of a mean average, we elected to use a median (the midpoint of a distribution of measures) length of stay due to the median’s ability to avoid being negatively impacted by outlier values.

Table 3 shows the median annual ALOS by judicial status between 2015 and 2020.

Table 3: Median ALOS By Judicial Status

	2015	2016	2017	2018	2019	2020
Pretrial Felons	54	51	53	51	37	37
Probation Violators	17	31	30	15	16	36
Pretrial Misdemeanants	8	8	9	10	8	10
Sentenced Felon Probationers	80	69	100	97	108	178
Total Population	15	16	18	19	16	34

There are several takeaways from the length of stay data. It should be noted at the outset that the length of stay for pretrial felons improved significantly in 2019, prior to the pandemic. In addition, we see a steady length of stay for pretrial misdemeanants over time. In a typical large jail, we would expect the median length of stay for pretrial misdemeanants to be 2 days or less. However, OCCC is unique in that there are comparatively few shorter stay inmates. It is relatively common for individuals to bond out of custody prior to being transferred to OCCC. Due to some data nuances, the population of sentenced felons was treated separately, as their median numbers reflect their entire stay in the Hawaii correctional system (Table 4).

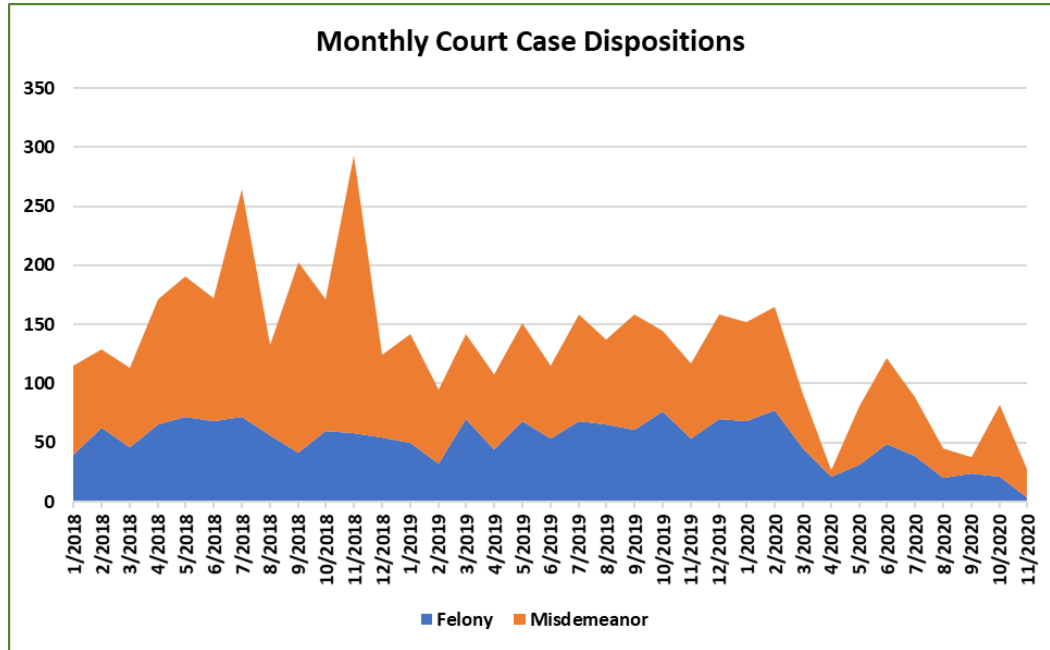
Table 4: Median ALOS of Sentenced Felons

	2015	2016	2017	2018	2019	2020
Sentenced Felons	1,388	1,274	1,295	1,231	1,445	1,234

Judiciary Data Analysis

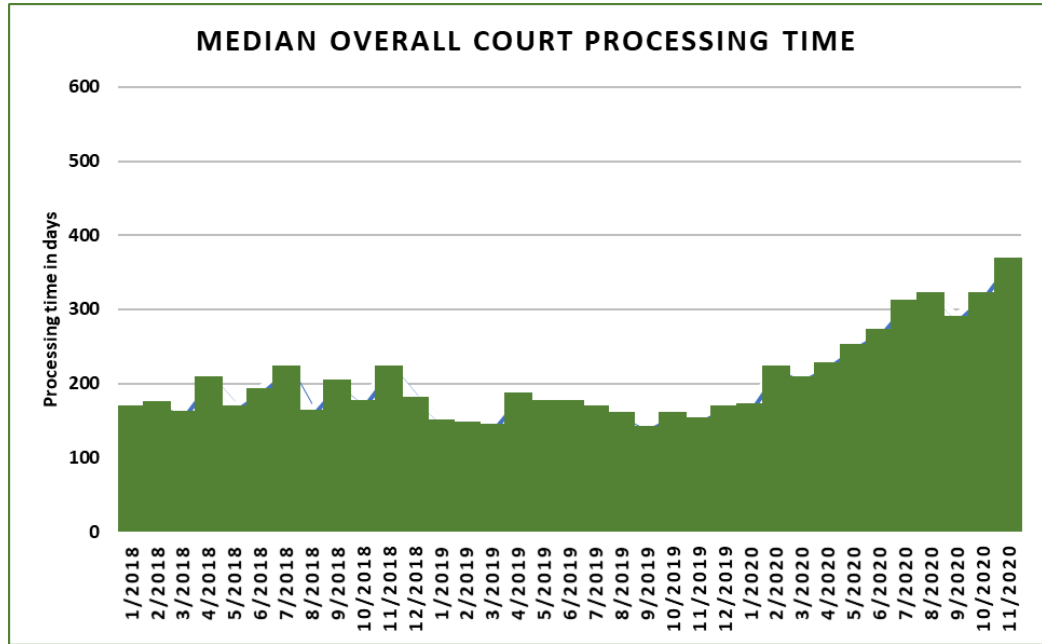
One of the key determinants of a correctional facility's population is the judiciary. The business of the courts can impact both admissions as well as length of stay. In order to account for this in the present project, we acquired a comprehensive data extract from the Hawaii Judiciary which covered every case in Oahu between 2018 and the end of November 2020. The data extract was then linked to the line by line data from PSD, allowing us to develop a more comprehensive analysis. Figure 26 shows the monthly number of cases disposed during our analysis time. Note the impact of the pandemic on the trend.

Figure 26: Monthly Court Case Dispositions



A traditional measure for evaluating courts is the time required to process cases over a given time period. This case processing time is generally a median calculated for all cases. However, for our purposes, this measure is not all that helpful because inmates may have more than one matter in the courts. Thus, we calculated a processing time that was based not on the case, but on the defendant. Specifically, we calculated the average length of time it took individuals to have all of their matters disposed by the courts. To accomplish this, we calculated each defendant’s earliest start and latest end dates for all cases and charges. The resulting measure is more of a ‘people processing time’ rather than the traditional ‘case processing time’. Figure 27 shows the monthly median overall processing time between 2018 and 2020. Note that processing time actually begins to decrease before the pandemic hit. The impact of the pandemic on the judicial process is rather obvious in the graph, but not surprising considering that in-person hearings were severely impacted during the pandemic.

Figure 27: Median Overall Court Processing Time



Figures 28 and 29 break out the processing time for felony and misdemeanor matters by person. The impact on felony time is not as stark as the misdemeanor time, reflecting efforts on the part of the judiciary to keep the process going during the pandemic as much as possible for more serious matters. We also note the improvement in processing time for misdemeanants prior to the pandemic, reflecting excellent work by the judiciary to process such cases more efficiently.

Figure 28: Median Felony Court Processing Time

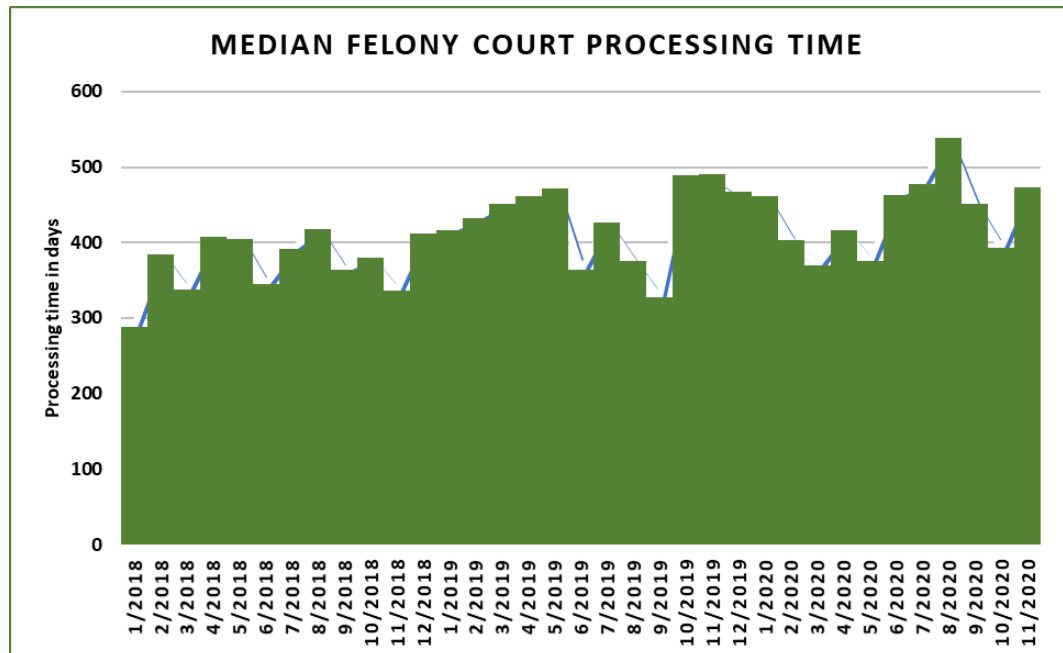
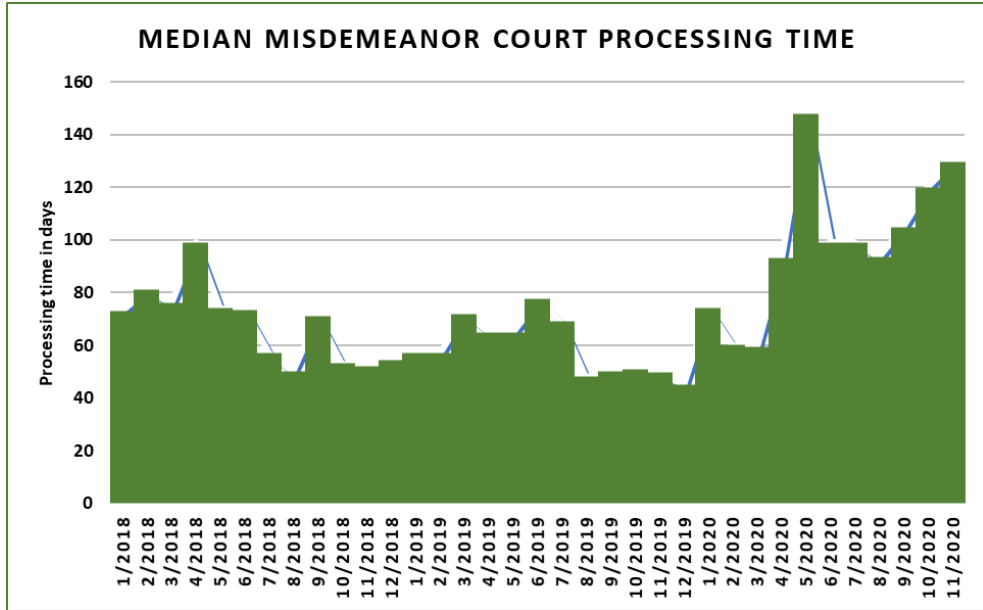


Figure 29: Median Misdemeanor Court Processing Time



OCCC POPULATION FORECAST

Population Forecast

Multiple population forecast models were built in order to develop an overall OCCC population forecast. In addition, using the information developed during the drill down processes into the case status data, we developed an alternate model of the potential OCCC population and its future bed requirements.

Background and Methodology

Generally, the best predictor of any correctional facility population's future pattern is the population's past pattern. However, because of the existence of unforeseen circumstances, it should be noted that the precision of forecasts of all kinds diminishes the further into the future one projects. All forecasts are only as good as what is known when the forecast was produced. The long-term accuracy of correctional population forecasting is heavily impacted by changes in public policy, law enforcement strategies, socioeconomic factors, and a host of other influences. Statistically speaking, correctional population forecasts by their very nature assume that the status quo at the time the forecast is produced remains in place for the duration of the forecast.

In order to avoid issuing a jail population forecast that may have an extremely short shelf life, the present project offers a main jail population forecast based on the best performing statistical models as well as a 'what if' scenario which could guide decision making in case unforeseen changes in bookings and/or ALOS occur. The margin of error for these forecasts is essentially plus or minus 5% by the year 2032.

There are multiple statistical methodologies for building statistical forecasts. The forecasting technique developed from Box and Jenkins' Autoregressive Integrated Moving Averages (ARIMA) approach is one of the best options. To that extent, a series of ARIMA forecasts of jail population variables were employed in this study. ARIMA is generally used in time series forecasting situations primarily because of its ability to avoid the built-in errors of other forecasting techniques. ARIMA approaches are designed to estimate, diagnose and control for autoregression problems. In addition, because ARIMA examines the past behaviors of a given trend, this approach can forecast multiple time points into the future. Moreover, ARIMA approaches allow the statistician to account for seasonal fluctuations in data as well as smooth out random fluctuations.

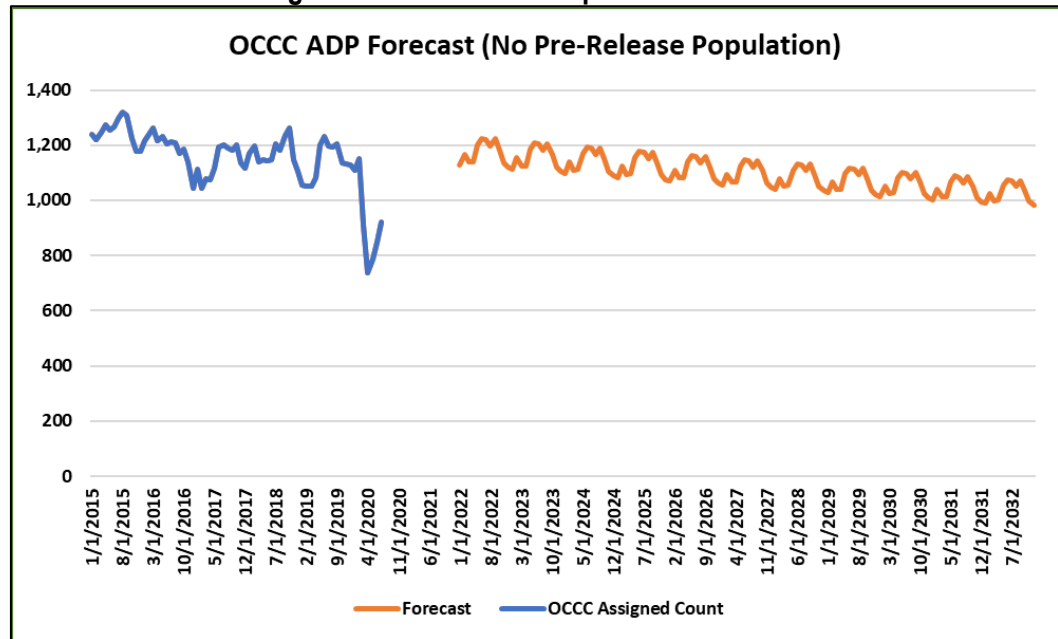
Average Daily Population Forecast

Main Forecasts

The ARIMA forecast model performs best when at least 50 time points of past data are available. For the present forecast effort, the OCCC assigned ADP for each month dating back to January 2015 was utilized. Median criminal court processing time, projected Honolulu County population growth, and the prior history of the OCCC population were predictor variables in the model. We should note that the State of Hawaii Department of Business, Economic Development and Tourism forecasts that Honolulu County is expected

to have an annual growth rate ranging from 0.3% to 0.4% during the forecast window¹. The main forecast includes both male and female² inmates and is depicted in Figure 30. In addition, we treated the pre-release population in a separate forecast in order to support planning for that part of the project. Because a significant portion of the inmates included in that separate pre-release forecast (those housed in Laumaka & Module 20) appear in the assigned count data for the OCCC facility proper, we needed to reduce the assigned count ADP by 10% to avoid including both the pre-release and OCCC detention populations in the main facility forecast. Our forecast calls for a steady decrease in the population, with seasonal peaks and valleys. Note that there is a gap between January 2020 (the last viable pre-pandemic assigned ADP count in our data) and the start of the forecast period in January 2022. As of this writing, we are uncertain what the criminal justice system’s ‘return to normal’ may look like, but the assumption for this forecast is a return to prior criminal justice system dynamics will occur by the start of 2022. It is quite possible that the population will have a brief rebound period that actually exceeds the forecast line as court backlogs are reduced.

Figure 30: Main OCCC Population Forecast



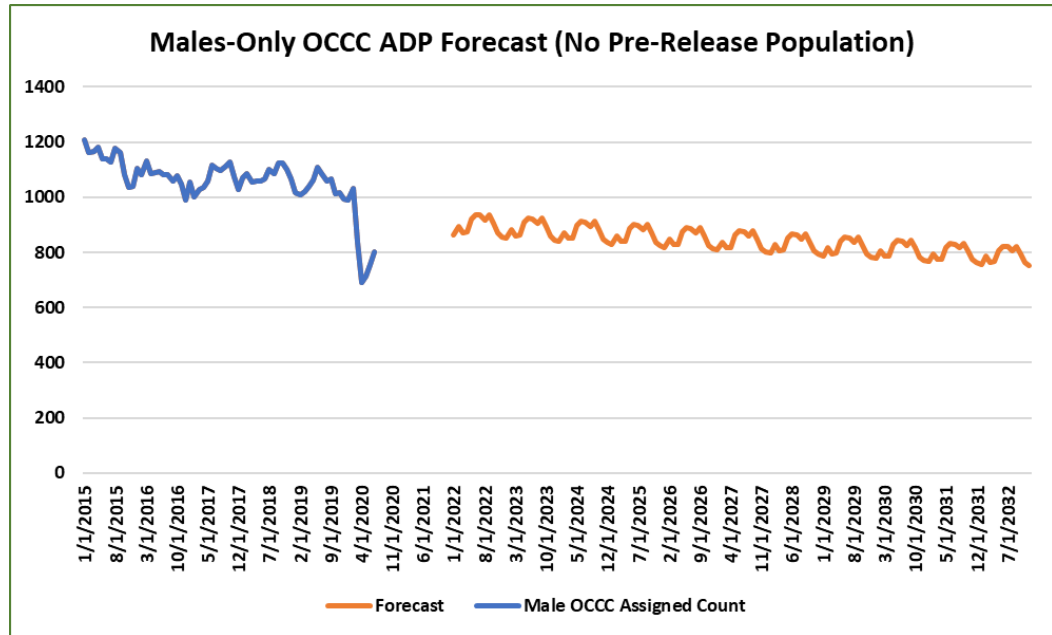
Knowing that the plan for the new OCCC facility calls for an only male population, we duplicated the modeling process to include only male inmates and again exclude pre-release inmates. The predictor variables which emerged from the ARIMA process were the same as they were for the complete forecast. Figure 31 shows the resulting forecast. It has

¹ https://files.hawaii.gov/dbedt/economic/data_reports/2045-long-range-forecast/2045-long-range-forecast.pdf

² We included the female forecast recognizing that in the future all females will be housed in the expanded WCCC

the same shape as before, with a reduction in the numbers.

Figure 31: Males-Only OCCC Population Forecast



The main ADP forecast, using these assumptions, predicts that the ADP of the facility in 2032 will be 788 individuals held in detention. This forecast provides a starting point for the determination of the facility’s future population. However, the forecast needs to be increased by two factors to properly plan for the actual bed capacity of the new OCCC:

1. Peaking factor - to reflect the daily and seasonal variations in jail occupancy and to accommodate the temporary closure of beds due to the need for maintenance, and,
2. Classification factor - to adjust for the requirement to separate inmates as needed based on security requirements, treatment needs, etc.

For the peaking factor calculation, we took each day’s population between 2015 and July 2020 and compared it to the ADP. The daily population fluctuations were such that one could expect the highest population during any day to be 5% greater than the ADP. In addition, not all facility beds are always available for use by every inmate. For instance, a vacant bed in a community unit cannot be filled with a medium inmate, a maximum security inmate cannot be placed in a vacant bed in a minimum security setting, etc. A classification factor is, in effect, an acknowledgement of this reality. Based on our analysis of the classification data, we call for a classification factor of 10.6%. Table 5 provides the projected OCCC detention bed needs for the next 10 years and includes application of the peaking and classification factors described above. Thus, with a projected ADP of 875 in 2024, the actual detention bed need becomes 1,012. Also note that the forecasted detention bed need in 2032 is 101 beds lower than what is projected for 2024.

Table 5: Bed Need for OCCC Males, With No Pre-Release Included³

Year	Males			
	ADP	Peaking (5%)	Classification (10.6%)	Total Bed Need
2024	875	44	93	1,012
2026	853	43	90	986
2028	831	42	88	960
2030	809	40	86	935
2032	788	39	84	911

As part of our process, we calculated the bed need (Table 6) for the female population which will transfer over to the Women’s Community Correctional Center (WCCC). The 2024 ADP for this group is 170 with a bed need of 215. As with the males, the ADP is expected to decrease slightly by the end of the forecast window in 2032. Note that the peaking and classification numbers for this segment of the population are different from the males and were calculated separately for each gender.

Table 6: Bed Need for WCCC Females

Year	Females			
	ADP	Peaking (14%)	Class. (12%)	Total Bed Need
2024	170	24	20	215
2026	166	23	20	209
2028	162	23	19	204
2030	157	22	19	198
2032	153	21	18	193

³ Recall that we reduced the assigned ADP number by 10% to account for the individuals held in Laumaka and Module 20.

Pre-Release Forecast

The pre-release forecast was prepared next. Key stakeholders have made it clear that the pre-release population at OCCC historically has been artificially constrained by capacity challenges at Laumaka and Module 20 at OCCC. Put simply, the number of candidates for the work furlough program exceed the number of available beds. In order to properly forecast the pre-release population, we analyzed the number of sentenced felons with community or minimum classification at both OCCC (including Laumaka) and the Waiawa Correctional Facility. The forecast showed a small, yet sustained decrease in the population over time. The peaking factor for this population was a bit higher (8.5%) due to large-group prison transfers which create periodic high fluctuations on the ADP. Because the inmates in question all share the same classification level, we did not calculate a classification factor. Table 7 provides the bed need numbers for the male pre-release population.

Table 7: Bed Need for Pre-Release Population

Year	Males		
	ADP	Peaking (8.5%)	Bed Need
2024	362	31	393
2026	354	30	384
2028	346	29	375
2030	338	29	367
2032	330	28	358

Table 8 below presents the final ADP numbers for the OCCC male detention forecast as well as the pre-release population. Taken together, we anticipate a bed need of 1,405 in the near term (2024), decreasing to 1,269 at the end of the forecast window (2032).

Table 8: Bed Need for OCCC and Pre-Release Population

Year	OCCC (Males)				Pre-Release			Grand Total Bed Need
	ADP	Peaking (5%)	Class. (10.6%)	OCCC Bed Need	ADP	Peaking (8.5%)	Pre-Release Bed Need	
2024	875	44	93	1,012	362	31	393	1,405
2026	853	43	90	986	354	30	384	1,370
2028	831	42	88	960	346	29	375	1,336
2030	809	40	86	935	338	29	367	1,302
2032	788	39	84	911	330	28	358	1,269

Given the fact that the current project is not the first forecast effort for the OCCC facility, it is prudent to provide a comparison with the previous 2016 forecast to evaluate what has happened. The 2016 forecast was apparently based on a linear trend model that was set in tandem with expected population growth. As Table 9 shows, our time series modeling effort has a somewhat similar ADP (83 inmates lower, primarily due to the fact that the Laumaka and Module 20 inmates are now excluded from the projections). However, the current forecast added a higher peaking factor which was calculated at 5% versus the assumed lower peaking factor of 2.5% in 2016. In addition, the current forecast adds in an upfront calculated classification factor, ultimately resulting in a slightly higher bed need. However, the proposed bed needs from the 2018 master plan recommended a higher bed need of 1,044 for OCCC which factored in classification serving to increase the projected 2016 forecast bed need by 9%. (excluding pre-release).

It is also important to point out, that no correctional facility should be operating at 100% or higher of its bed capacity which has historically been the case at OCCC. The peaking and classification factors help contribute to providing the necessary cushion to safely and effectively operate a facility at between 85% to 90% of its maximum bed capacity.

Table 9: 2016 Forecast vs 2021 Forecast for the Year 2026

Component	2016 Forecast		2021 Forecast	
	ADP	With 2.5% Peaking (Bed Need)	ADP	With Specific Peaking & Classification Factors (Bed Need)
OCCC Males (No Pre-Release)	936	959	853	986
OCCC Females (No Pre-Release)	237	243	166	209
OCCC Total (No Pre-Release)	1,173	1,202	1,019	1,195
Pre-Release (Males)	392	--	354	384

Alternative Forecast

Our drill-down analysis into the major case status population groups included a full scale analysis of each inmate’s classification and charge levels. Based on our experience with multiple jurisdictions’ efforts at reducing or tempering crowding pressures, we extended our analysis to determine if there was an opportunity to reduce the future OCCC population. Put simply, applying standards used in other jurisdictions, there are potentially groups of inmates who could be dealt with using detention alternatives.

Methodology

Our alternative forecast study estimated the potential population reduction opportunity by combining the classification and most serious offense data for the five (5) largest judicial

status components of the population. In terms of classification, we assume that the group of community and minimum classified inmates contain individuals who could reasonably be eligible for release. In terms of the most serious offense data, our assumption is that within the inmate population charged with offenses including property, conditional release violations, and public order/traffic, there are individuals who could be released safely or initially diverted without risk to the general public. By definition, we excluded individuals who had violent charges, weapons charges, sex offenses, etc. These assumptions are also based on the best practices of other county jurisdictions on the mainland.

We acknowledge that our analysis is an estimate because we do not possess the criminal history information as well as the failure to appear rate (if applicable) for each individual in the database. This is important because a given candidate for release just using the classification and offense data may actually have a history of failing to appear or a previous violation of conditional release. In order to estimate the potential impact of criminal history on our analysis, we employed percentages developed in a risk assessment study of the Federal Courts⁴. Therefore, in the end, we selected community and minimum inmates who had property, conditional release violations, or public order/traffic offenses and then applied criminal history percentage estimates in order to develop numbers of inmates who could possibly be diverted.

Diversion Estimates

Our first analysis was to examine the male pretrial felon population. After extracting the community and minimum classified male pretrial felons, we applied our offense logic. Table 10 represents the ADP by most serious offense for the minimum/community classified male pretrial felons in the OCCC population. While we are only estimating the diversion opportunity for the property and public order/traffic inmates, we included all charges in Table 10 below in case a reader wanted to see the impact of including other charge groups.

⁴ https://www.uscourts.gov/sites/default/files/73_2_1_0.pdf. While this study was not specific to the State of Hawaii, it is a comprehensive, large sample study of failure to appear rates.

Table 10: Diversion Opportunity for Minimum/Community Classified Male Pretrial Felons

	VIOLENT	DRUGS	PROPERTY	OFFENSES VS GOVERNMENT	CONDITIONAL RELEASE VIOLATION	PUBLIC ORDER/ TRAFFIC	OTHER	TOTAL ADP
2015	19	56	93	18	6	24	8	224
2016	19	57	98	26	11	21	7	239
2017	15	46	85	19	15	14	8	203
2018	15	40	80	18	11	13	9	186
2019	12	39	53	11	10	10	6	141
2020	14	22	46	11	14	6	4	117

Table 11 takes the property and public order/traffic inmate ADP numbers from Table 10 and estimates the number who could reasonably be diverted from custody. Using 2019 as our pre-pandemic reference year, and after analyzing the specific charges (excluding any violent, sex offense, or conditional release violation) in combination with the percentages of failures to appear in the Federal Court study, we estimate that 60% of those individuals charged with property offenses and 80% of those individuals charged with public order/traffic offenses could potentially be safely released and diverted from detention in the future. The result is a net potential ADP reduction of nearly 40 inmates (31.8 property inmates + 8 public order/traffic inmates).

Table 11: Male Pretrial Felon Diversion Estimate

	PROPERTY		PUBLIC ORDER/ TRAFFIC		TOTAL DIVERTED
	ADP	60% DIVERSION	ADP	80% DIVERSION	
2015	93	56	24	19	75
2016	98	59	21	17	76
2017	85	51	14	11	62
2018	80	48	13	10	58
2019	53	32	10	8	40
2020	46	28	6	5	32

We applied the same logic to our next group, the male probation technical violators. This particular analysis was a bit easier because the inmates in question all share the same most serious offense. In 2019, the ADP of male probation violators at OCCC was 266. Of the 266, an ADP of 173 had community or minimum classification. After analyzing the specific charges involved for the inmates in question, in combination with the percentages of failures to appear in the Federal Court study, we estimate that there potentially could be an 80% reduction in this population by using non-incarceration alternatives. This is potentially a conservative estimate, knowing that other jurisdictions rarely incarcerate for technical violations. The net result of the 80% estimate is an ADP reduction of 138 inmates.

Table 12: Male Technical Probation Violator Diversion Estimate

	TECHNICAL PROBATION VIOLATORS		TOTAL DIVERTED
	ADP	80% DIVERSION	
2015	169	135	135
2016	182	146	146
2017	177	142	142
2018	198	158	158
2019	173	138	138
2020	130	104	104

Our third largest OCCC population group is sentenced felon probationers. As done with the pretrial felons, Table 13 presents all of the offense data for the male sentenced felon probationers who had minimum or community classification.

Table 13: Diversion Opportunity for Minimum/Community Classified Sentenced Felon Probationers

	VIOLENT	DRUGS	PROPERTY	OFFENSES VS GOVERNMENT	CONDITIONAL RELEASE VIOLATION	PUBLIC ORDER/ TRAFFIC	OTHER	TOTAL ADP
2015	18	27	52	12	22	14	8	151
2016	6	25	39	6	10	7	6	99
2017	8	22	30	10	12	5	5	92
2018	9	24	33	7	15	8	5	101
2019	10	25	31	8	21	8	6	109
2020	7	10	15	3	13	4	4	56

Table 14 breaks out what we judge to be the most realistic diversion opportunity for the male sentenced felon probationers: individuals with property offenses, conditional release violations, and public order/traffic violations. Again, using 2019 as our index year, after analyzing the specific charges involved for the inmates in question (in combination with the percentages of failures to appear in the Federal Court study), we estimate that 70% of the those individuals charged with property offenses, 50% of the conditional release violators, and 90% of the individuals charged with public order/traffic offenses could potentially safely be released and diverted from detention in the future. This would result in a net ADP reduction of approximately 39 inmates (21 property, 11 conditional release, and 7 public order/traffic).

Table 14: Diversion Estimate for Sentenced Felon Probationers

	PROPERTY		CONDITIONAL RELEASE VIOLATION		PUBLIC ORDER/ TRAFFIC		TOTAL DIVERTED
	ADP	70% DIVERSION	ADP	50% DIVERSION	ADP	90% DIVERSION	
2015	52	36	22	11	14	13	60
2016	39	27	10	5	7	6	39
2017	30	21	12	6	5	5	32
2018	33	23	15	8	8	7	38
2019	31	22	21	11	8	7	39
2020	15	11	13	7	4	4	21

Male pretrial misdemeanants are our final group for diversion analysis. Again, using the same methods as before, we present the diversion opportunity for all offenses in Table 15.

Table 15: Diversion Opportunity for Minimum/Community Classified Pretrial Misdemeanants

	VIOLENT	DRUGS	PROPERTY	OFFENSES VS GOVERNMENT	CONDITIONAL RELEASE VIOLATION	PUBLIC ORDER/ TRAFFIC	OTHER	TOTAL ADP
2015	10	0	5	9	1	10	3	39
2016	9	0	5	13	2	13	6	48
2017	10	0	7	14	2	11	7	52
2018	12	1	5	15	3	9	7	52
2019	14	0	9	15	2	12	5	57
2020	12	0	5	15	1	4	8	46

Based on the 2019 numbers, as Table 16 shows, if 75% of the individuals charged with property offenses and 90% of individuals charged with public order/traffic offenses were safely released and diverted from detention in the future, the net ADP reduction would be nearly 18 inmates (6.8 property + 10.8 public order/traffic). Recall that these proportions are estimates derived from our analysis of the charges for each individual.

Table 16: Diversion Estimate for Pretrial Misdemeanants

	PROPERTY		PUBLIC ORDER/ TRAFFIC		TOTAL DIVERTED
	ADP	75% DIVERSION	ADP	90% DIVERSION	
2015	5	4	10	9	13
2016	5	4	13	12	16
2017	7	5	11	10	15
2018	5	4	9	8	12
2019	9	7	12	11	18
2020	5	4	4	4	7

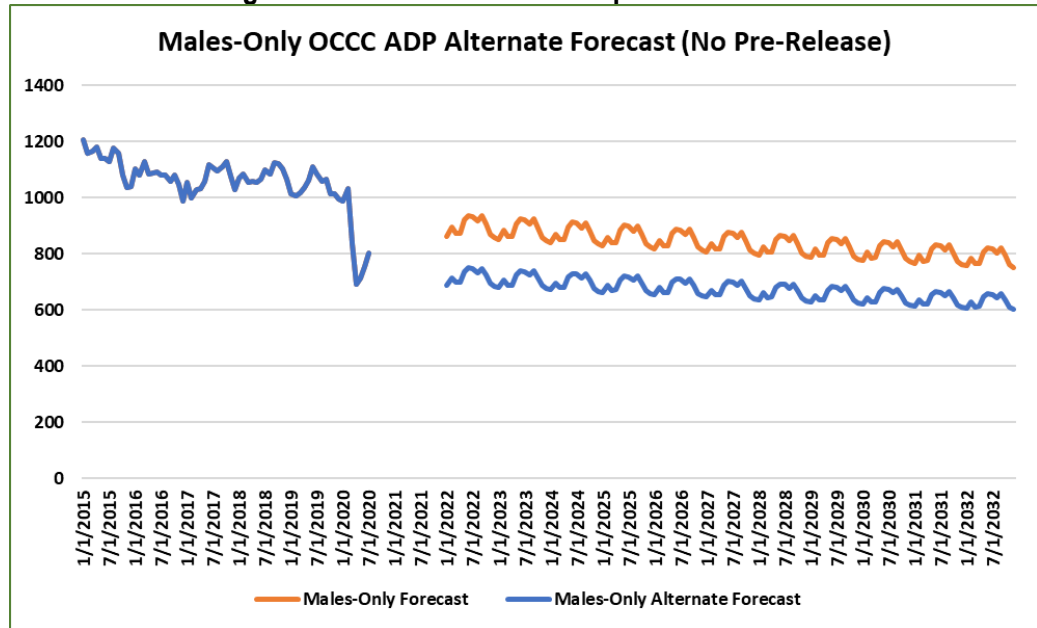
Finally, Table 17 summarizes our diversion analyses for the average daily population who could have been diverted from jail and the OCCC in 2019 applying the above assumptions.

Table 17: Diversion Opportunity Summary

Population Segment	Number
Pretrial Felons	40
Probation Violators	138
Sentenced Felon Probationers	39
Pretrial Misdemeanants	18
Total	235

Achieving this reduction would have a significant impact on our forecast. We applied the potential reduction to our male OCCC forecast result (see Figure 32). While the shape of the forecast is still the same, the projected inmate reduction reduces the projected ADP in 2032 to 631 inmates.

Figure 32: Alternative OCCC Population Forecast



Meanwhile, this forecast would naturally result in a lower bed need as well. Table 18 provides a comparison of the bed need between the main forecast and the alternate forecast.⁵

Table 18: Main & Alternate Forecast Comparison

Year	Main Forecast			Alternate Forecast		
	OCCC Male Bed Need	Pre-Release	Grand Total	OCCC Male Bed Need	Pre-Release	Grand Total
2024	1,012	393	1,405	809	393	1,202
2026	986	384	1,370	789	384	1,173
2028	960	375	1,335	768	375	1,144
2030	935	367	1,302	748	367	1,115
2032	911	358	1,269	729	358	1,087

⁵ Note, there is no change in the pre-release forecast. While there are also opportunities to reduce this population as well, the assumption is that those individuals housed in pre-release will be engaged in a robust transitioning process to the community including work release, intensive programming, re-entry case management, etc. Their time at the facility is needed to help them re-engage society successfully.

Conclusions & Recommendations

The OCCC facility population has the dynamics of both a prison and a large county jail. As such, there are some challenges in forecasting the population using traditional means. Our analysis concludes that the OCCC population was receding well before the onset of the pandemic in Spring 2020. As society emerges from the pandemic and court backlogs are cleared, it would not be surprising to see a temporary period in which OCCC is actually overcrowded. Regardless, once the criminal justice system returns to normal functions, our assumption is that the population dynamics will begin to resemble what was witnessed throughout 2019. As such, and absent some public policy changes, our forecast indicates that the OCCC population will resume its gradual decline over time. Accordingly, while the bed need in 2024, assuming no legislative, corrections policy or criminal justice changes, is projected at 1,012 beds for OCCC and 393 for pre-release including the 96 bed Laumaka facility, those numbers are expected to decline by 2032 to 911 and 358 beds respectively. The number of new beds to be constructed as recommended during the master plan process in 2016-18 was 1,044 new rated OCCC beds; with planned pre-release housing planned for 288 new rated beds. The current bed projections are in-line with the master plan recommendations for both OCCC and pre-release for the year 2024.

Our analysis also provides indications that there are other opportunities to reduce the OCCC population. As of this writing, the Hawaii legislature is considering legislation to reduce or eliminate monetary bail (SB1260). While the exact impact of SB1260 on future populations is unclear, such legislation is a good first step toward reducing the future OCCC population level. Clearly, the intent of the bill is to divert defendants from detention along very similar lines to what we employed in our diversion analysis. If this piece of legislation (or one like it) were to become law, future public policy initiatives should focus on expanding the reach of the legislation to also include certain low-level non-violent felonies as well as technical probation violations. This would mirror the approach we used in our diversion analyses. Unless population reduction (such as the diversion estimates that we have detailed) can be implemented through policy and legal reforms, the new OCCC will still be a large facility with a large detention and pre-release population.

Moreover, we note that it is critically important for the system to ensure that bail/risk information is available to all parties as early as possible in the judicial process in order to speed up case processing beyond the improvements we have noted in our analysis. Such a practice would establish a strong foundation for a more robust pretrial services approach to divert and monitor appropriate defendants in the future, further suppressing correctional populations.

Finally, the public policy landscape is currently unclear regarding what practices adopted during the pandemic will become permanent fixtures of the criminal justice system going forward. Therefore, once the criminal justice system returns to more routine functioning, it is recommended that the forecast (including the projected inmate population components) be checked against the actual population and updated/adjusted as necessary.