



Oregon Corrections Population Forecast

April 1, 2009

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Background

The Office of Economic Analysis produces the semi-annual Oregon Corrections Population Forecast which provides projections of the offender populations supervised by the Department of Corrections (DOC). The forecast estimates the number of inmates in the state prison system, offenders on probation, parole, and post-prison supervision, and felony offenders serving sentences of 12 or fewer months in county jails.

Executive Order 95-06 directs the Department of Administrative Services and the Corrections Population Forecasting Advisory Committee to produce the forecast. The forecast is mandated to estimate monthly populations over a ten year period and is due April 1 and October 1 of each year. State agencies, in particular the DOC and the Oregon Criminal Justice Commission, are mandated to use the forecast for budgeting and policy development where the offender population is concerned.

The advisory committee is comprised of individuals with knowledge of the criminal justice system. It meets several times before each forecast to discuss issues related to the inmate population.

Corrections Population Forecasting Advisory Committee

Honorable Julie Frantz (Chair)
Todd Anderson
Jason Carlile
Greg Hazarabedian
Steven Powers
Craig Prins
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Chief Rosanne M. Sizer
Troy Clausen
Max Williams

Multnomah County Chief Criminal Judge
Tillamook County Sheriff
Linn County District Attorney
Public Defender Services of Lane County
Board of Parole and Post-Prison Supervision
Criminal Justice Commission Executive Director
Multnomah County Deputy District Attorney
Portland Police Bureau Chief
Director Marion County Community Corrections
Director Department of Corrections

For more information or questions regarding the forecast please use the following contact information:

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Trends and Forecast Methodology

The inmate forecast uses a model which simulates the flow of inmates from intake to prison, through their stay, and departure as prisoners are released. The primary driver of the forecast in the short term is the release rate of the existing population base. In the long term, new intakes drive population trends. Since sentence information is known for existing inmates, releases can be modeled in a quazi-deterministic manner, whereas new intakes are forecasted.

Intakes are forecasted based on historical trend. The trend integrates demographics, criminal justice practices, and other factors which influence intakes and sentence lengths. This trend builds to a baseline forecast. The forecast relies on history from 2003 on; trends prior to that are not used because of the influence of significant law and policy changes.

Trends in criminal activity do not form the base for the forecast since they do not historically correlate with the prison population. Criminal activity (e.g., as measured by arrests and reported crime) has generally decreased in Oregon over the past decade, while the prison population has increased significantly. The increase is primarily due to sentencing law such as Measure 11 and repeat property offender laws (e.g., ORS 137.700 and 137.717) which require longer prison sentences as compared to prior sentencing guidelines.

The forecast relies on the concept of sentence volume and intake volume. That measure, in person-months, is the number of inmates multiplied by the length of stay for each. For example, 3 inmates, each with a 10 month stay, would contribute 30 person-months to the volume. This is an apt measure for forecasting since it captures length of stay information which influences the population prospectively.

Measured monthly over the past 6 years, the trend in intake volume has been quite variable, but it has had near zero overall trend (slightly negative, but statistically not different from zero). Similarly, the number of intakes each month has not shown a significant trend up or down.

Over the past year, intake volume has been high relative to the number of intakes: the monthly number of intakes remained steady, but the average sentence length was longer. The longer sentences directly contribute to an increased inmate population for several years or more until those inmates with longer sentences start being released.

Each forecast month starts with a base population distributed based on expected length of stay. Lengths of stay less than one month represent inmates who will be released and are removed from the model. The intake volume is projected for each month and flows into the base of inmates for the next month. The equation below represents the elements:

$$\text{Population Base (Month 2)} = \text{Population Base (Month 1)} + \text{Intakes} - \text{Releases}$$

The community corrections forecasts rely primarily on the relatively stable historical trends in the respective populations. Likewise, breakdowns of the inmate population (e.g., by gender, security risk level) are based on stable historical trends.

Forecast

Prison Inmate Population

The prison population at the beginning of March 2009 was approximately 13,765, or 1.6 percent higher than one year before. Without the effects of Measure 57 (2008), the population would be expected to grow at an annual rate of 2 to 3 percent through mid 2010, with growth slowing to less than 1 percent in the outer years of the forecast. With the effects of Measure 57, growth is expected to exceed 5 percent through mid 2011, while gradually returning to baseline growth in the outer years for the forecast. The inmate population is expected to reach approximately 14,000 by mid 2009, 15,000 by mid 2010, and 16,000 by late 2012. Slow growth in the outer years means that by 2019 (the end of the forecast horizon), the population is not expected to exceed 16,500.

In the baseline scenario (absent Measure 57), the forecast assumes that the inflow of inmates, and the distribution of their sentence lengths, follow historical averages. The current base of inmates reflects a pool of remaining sentences which is larger than is historically typical (on average, longer remaining sentences). This leads to a stronger baseline growth rate over the next several years: current inmates will not be leaving as fast as new inmates come in. In the outer years, the current base of inmates with longer sentences tends to flush out, and growth rates will slow.

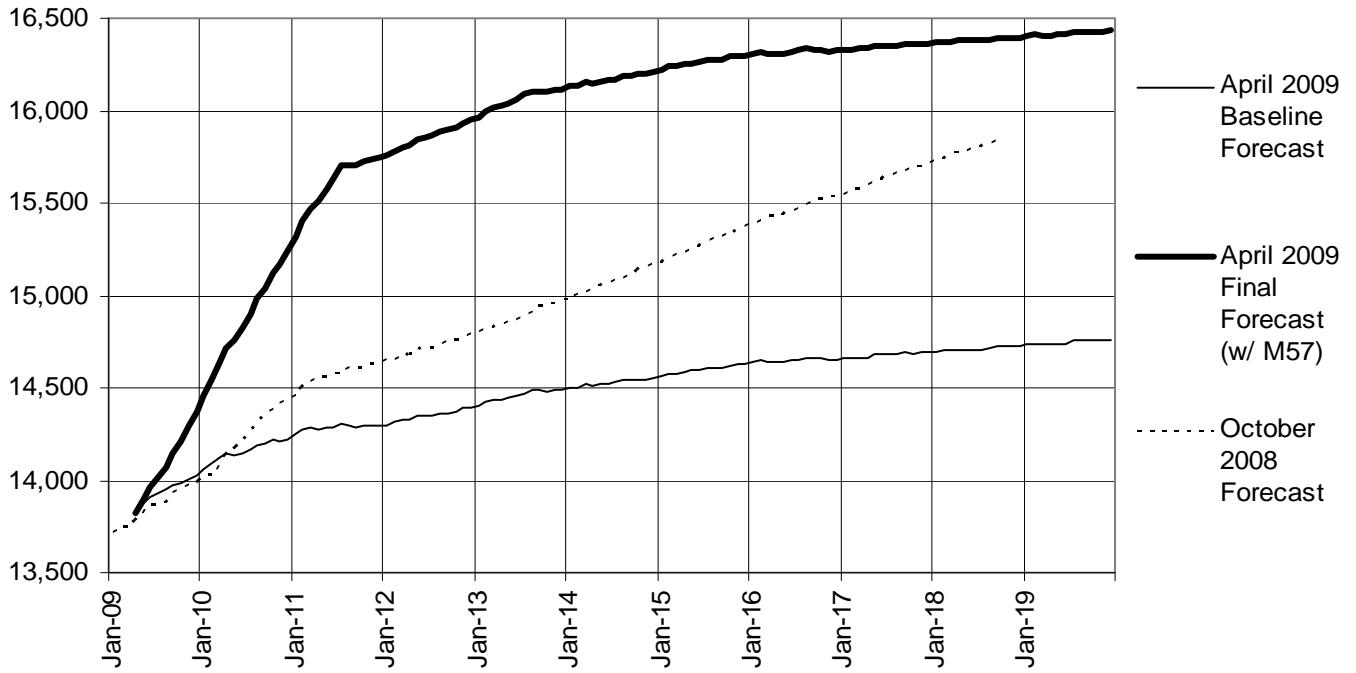
Much of the forecasted population growth through 2013 is attributable to Measure 57. It is expected to add approximately 1,600 inmates to the prison population by mid 2013, leveling out at a total additional 1,670 inmates in the outer years. Through consultation with the Corrections Population Forecasting Advisory Committee, the forecast accounts for the impact of Measure 57 per the analysis done for the Voter Pamphlet. It is expected to be many months before sufficient statistical data on the actual impact of Measure 57 is available. The Measure 57 impact is detailed in the appendix tables.

The impact of Measure 57 is evident on the graphs on the next page. The first graph shows a marked increase in the inmate population from 2009 to 2012 (heavy line) as compared to the baseline case (light line). The Measure 57 effect continues to increase through 2013, then levels out at a positive 1,670 inmates above the baseline forecast. Also shown on the graph is the prior forecast (dashed line).

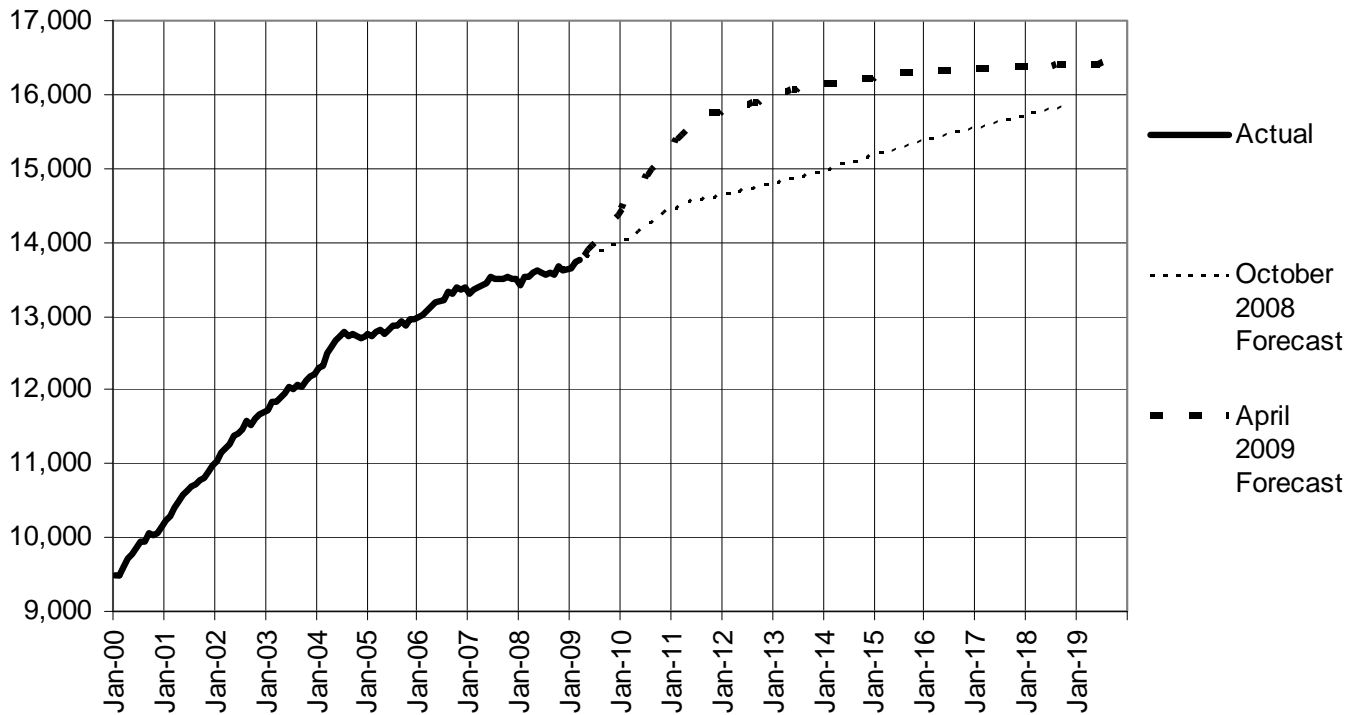
The second graph shows the current forecast (including the Measure 57 impact) in relation to the historical population levels since 2000.

This forecast does not make explicit adjustments from baseline associated with current budgetary conditions since the nature and extent of potential budget cuts is not yet known.

Prison Inmate Population, Prior Forecast, Current Baseline, and Current including M57 Impact:



Prison Inmate Population, Actual History, Prior Forecast, Current Forecast:



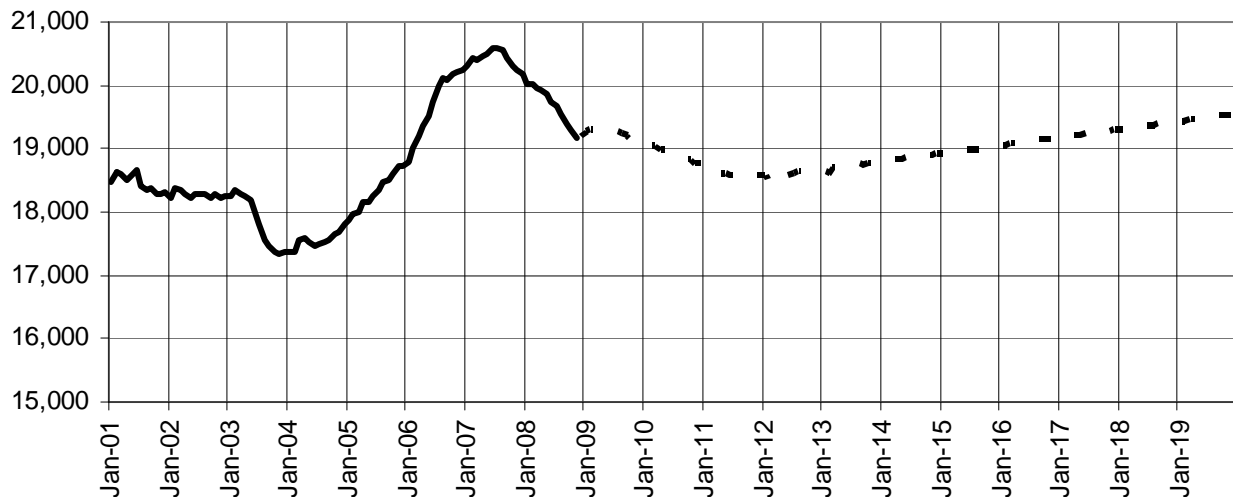
Community Corrections

Community corrections includes felony offenders who are supervised by Department of Corrections, but are not in prison. The forecast projects the felony probation caseload, local control population (incarceration in jail), and post-prison supervision (including parole). Each group is forecasted separately for budgeting purposes. Note: in contrast to past forecasts, the jail population associated with level III sanctions is not included in this forecast due to late availability of data, but the sanctions population can be expected to be approximately 500 by January 2010, and to 600 in the outer years of the forecast. The community corrections forecasts rely primarily on relatively stable historical trends in the respective populations.

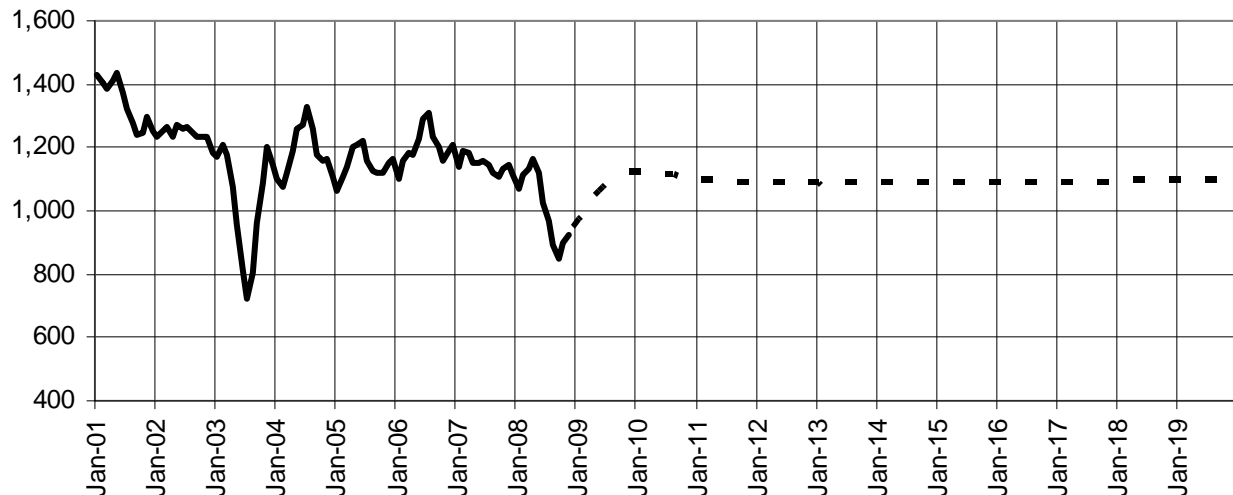
The effects of Measure 57 are included in the forecast per the fiscal impact estimates used for the Voter Pamphlet.

Historical values (solid lines) and forecast values (dashed lines) in the graphs below show each of the three groups from 2001 through the end of the forecast period. Details can be found in the appendix.

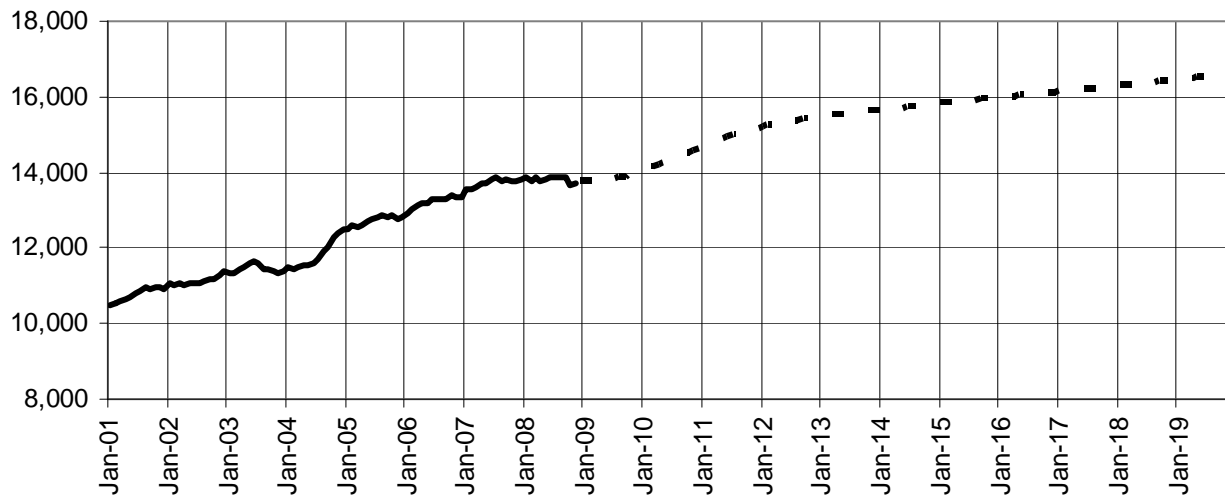
Probation Caseload:



Local Control Population (does not include level III sanctions):



Post-Prison Caseload:



Forecast Detail Tables

Monthly forecast numbers for the population of prison inmates, probation cases, local control jail population, and post-prison cases are in spreadsheet format as an appendix to this document. The spreadsheet also breaks down the prison population by gender and security risk level, and provides detail about the impact of Measure 57. See the following link.

<http://oregon.gov/DAS/OEA/corrections.shtml>.

Forecast Risks

The forecast assumes that current laws and current criminal justice practices continue as they are now. It also assumes trends in criminal activity continue and that demographics follow expected trends. If those and other assumptions fail, the forecast is at risk.

Law enforcement and judicial system practices have a significant effect on the flow of individuals through the court system and into the prisons. Emphasis on specific criminal activity and plea practices, for example, can change based on law enforcement policy.

The forecast is a high level look at the prison population, and does not attempt to predict the population on a given day. From month to month, intakes vary considerably. Due to that, differences from forecast of more than 100 can reasonably be expected for a given month.

There are three specific risks that could impact the prison population as early as mid 2009.

Governmental Budgetary Conditions. The state budget has been cut for the current biennium and the 2009-11 biennium is expected to have budgets with service levels below what is currently in place. Similarly, many local governments are being forced to make difficult budget choices that will likely impact the law enforcement, prosecution, and criminal incarceration. Reductions in law enforcement, local detainment systems, and court systems could change the flow of criminals to the prison and community corrections systems in ways that are difficult to predict.

Economic Conditions. Poor economic conditions are often thought of as a driver of crime. This may be partially true, in particular with regard to property crime, although the effect is not believed to be significant. On the other hand, given Oregon's strict sentencing for repeat property criminals, if property crime increases significantly the inmate population could increase more rapidly than expected.

Law Changes. Sentence lengths as opposed to crime rates are the most significant driver of the inmate population. Sentencing law changes have historically been the largest source of forecast error. As a result, the extent to which the impact from Ballot Measure 57 differs from expectations will increase forecast error. There have also been numerous bills introduced in the current legislative session which would change what defines felony criminal activity and could impact the forecast if passed.

In the outer years of the forecast, fundamental shifts in criminal tendencies in the general population pose a risk to the forecast. For example, over the past decade overall crime rates, including serious person crimes, have dropped. If that pattern were to reverse itself over the coming decade, the corrections population could expand well beyond current forecast.