

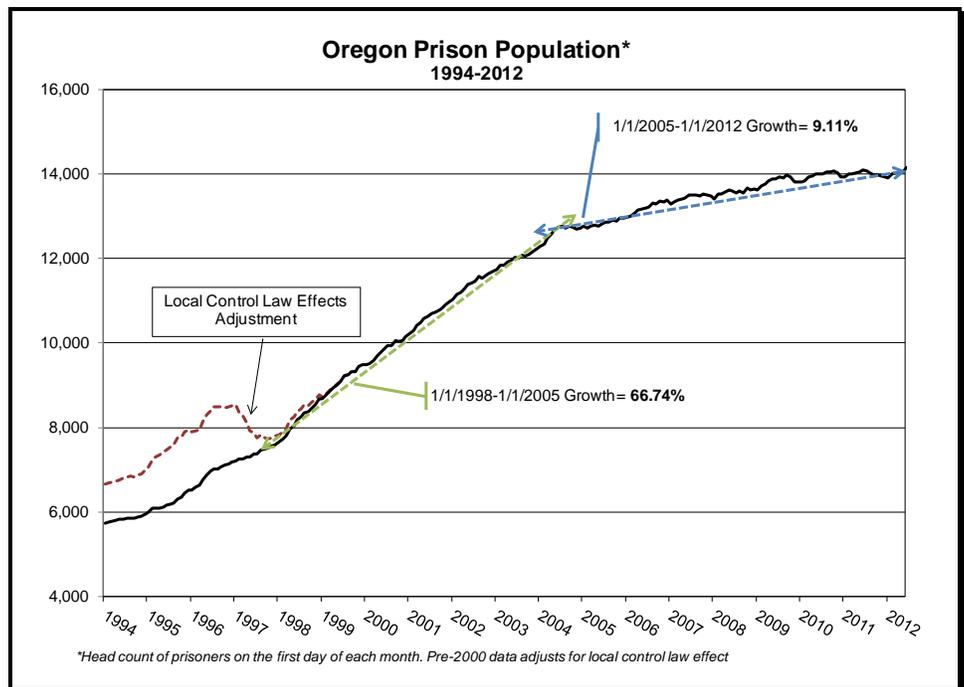
Oregon Prison Population Forecast Accuracy 2000-2012

Executive Order 95-06 and Oregon Revised Statute 184.351 direct the Department of Administrative Services (DAS) and the Corrections Population Forecasting Advisory Committee to produce a prison forecast twice a year.

This paper will analyze the historical accuracy of the prison population forecasts.¹ The historical forecast data on which this discussion is based is available on the Office of Economic Analysis' website².

The prison population in Oregon depends on many factors, including the overall population of the state, trends in criminal activity, the resources available to the criminal justice system, the areas of emphasis where those resources are targeted, as well as the penal code and other laws. As such, the size of the inmate population is subject to a great deal of uncertainty, even in the near term.

The impact of policy changes such as the sentencing reforms brought about by Oregon Ballot Measure 11 (1994) and Measure 57 (2008) have been particularly difficult to predict, and have often led to large changes in the population outlook. The prison population forecast is based on an assumption that current laws will persist into the future. As such, any law implemented by voters or policymakers that affects



Graph 1

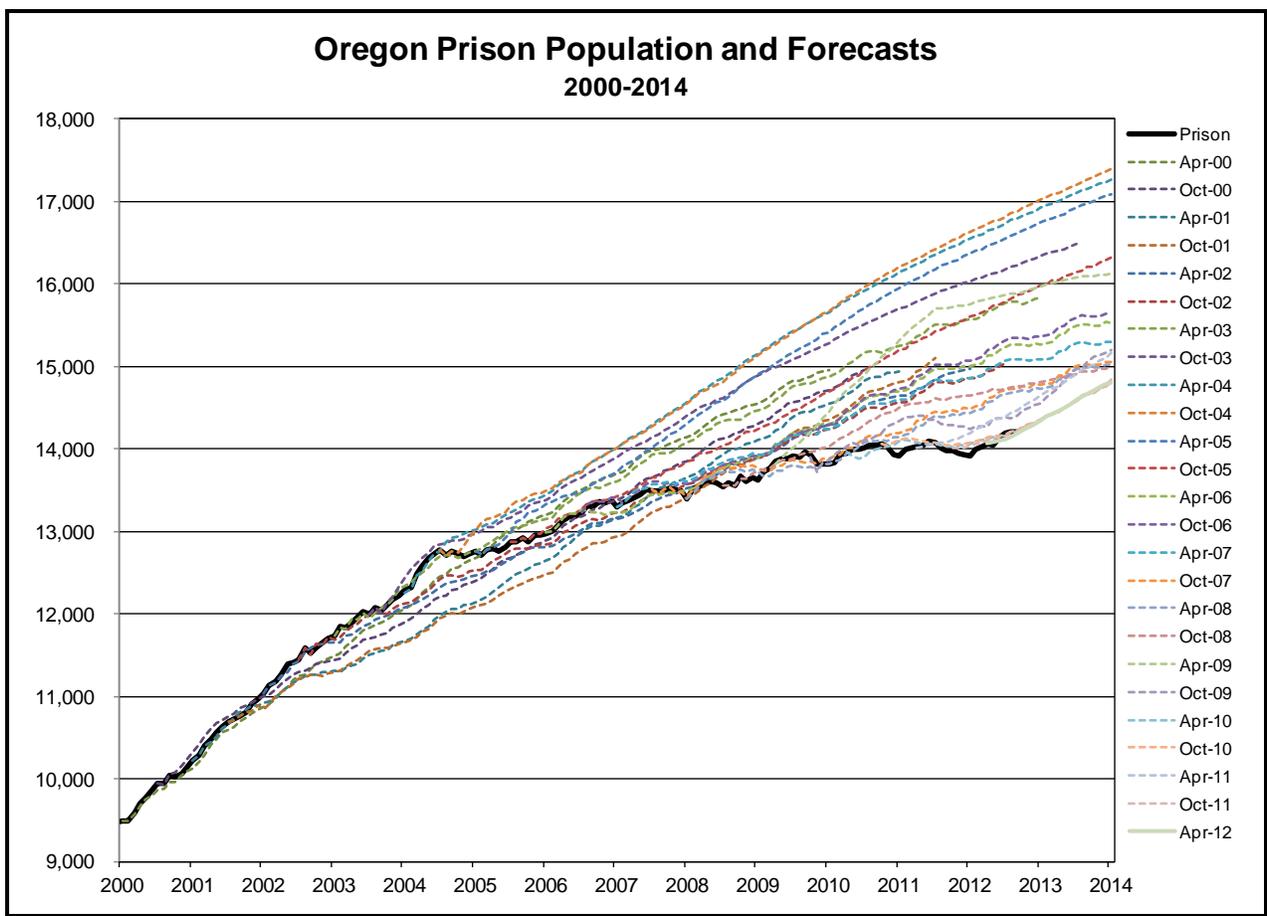
¹ Although the Office of Economic Analysis also forecasts parole, probation, juvenile and local control populations, this paper will only analyze the prison population forecasts.

² <http://cms.oregon.gov/DAS/OEA/Pages/corrections.aspx>

the number or length of prison stays can change the forecast significantly. It often takes years before the impacts of law changes are fully reflected in the prison population, which injects further uncertainty into the outlook.

Aside from periods following significant changes to Oregon law, large movements in the prison population forecast have also been seen following shifts in nationwide crime rates and changes in Oregon's migration trends. In the middle of the last decade, all three major factors (policy changes, migration into Oregon, and nationwide crime rates) acted in unison to put the brakes on prison population growth.

Graph 1 illustrates the sharp moderation in prison population growth seen in recent years. In the seven years since 2005, Oregon's prison population has expanded by 9%. In the seven years prior, the population expanded by 67%. This sharp slowdown in population growth was not fully anticipated, and as a result, the long-range population forecasts produced in the 1990's and early 2000's have since proven to be too high.



Graph 2

Graphs 2 & 3 and Table 1 illustrate how actual prison populations have compared to prison population forecasts. Forecast accuracy has changed significantly over time. Early in the 2000's, growth in Oregon's prison population was coming in significantly faster than was predicted. At that time, the forecast called for a moderation in the rapid prison population growth that had been seen since the passage of Measure 11. This expected moderation was in keeping with slower migration trends into the state and the maturity of Measure 11. Most of the serious criminals that were sentenced before Measure 11 was passed had served their time, aside from those who received very long sentences even in absence of the new rules.

After under predicting the prison population for several forecast rounds, the baseline population forecast and Measure 11 impact

estimates were revised upward significantly in the middle of the 2000's. In hindsight, these forecast adjustments were particularly poorly timed, coming just before the nationwide decline in crime rates and moderation in Oregon's prison population growth. This vintage of population forecasts has proven to be less accurate than any produced before or since (excluding those that reflect major law changes).

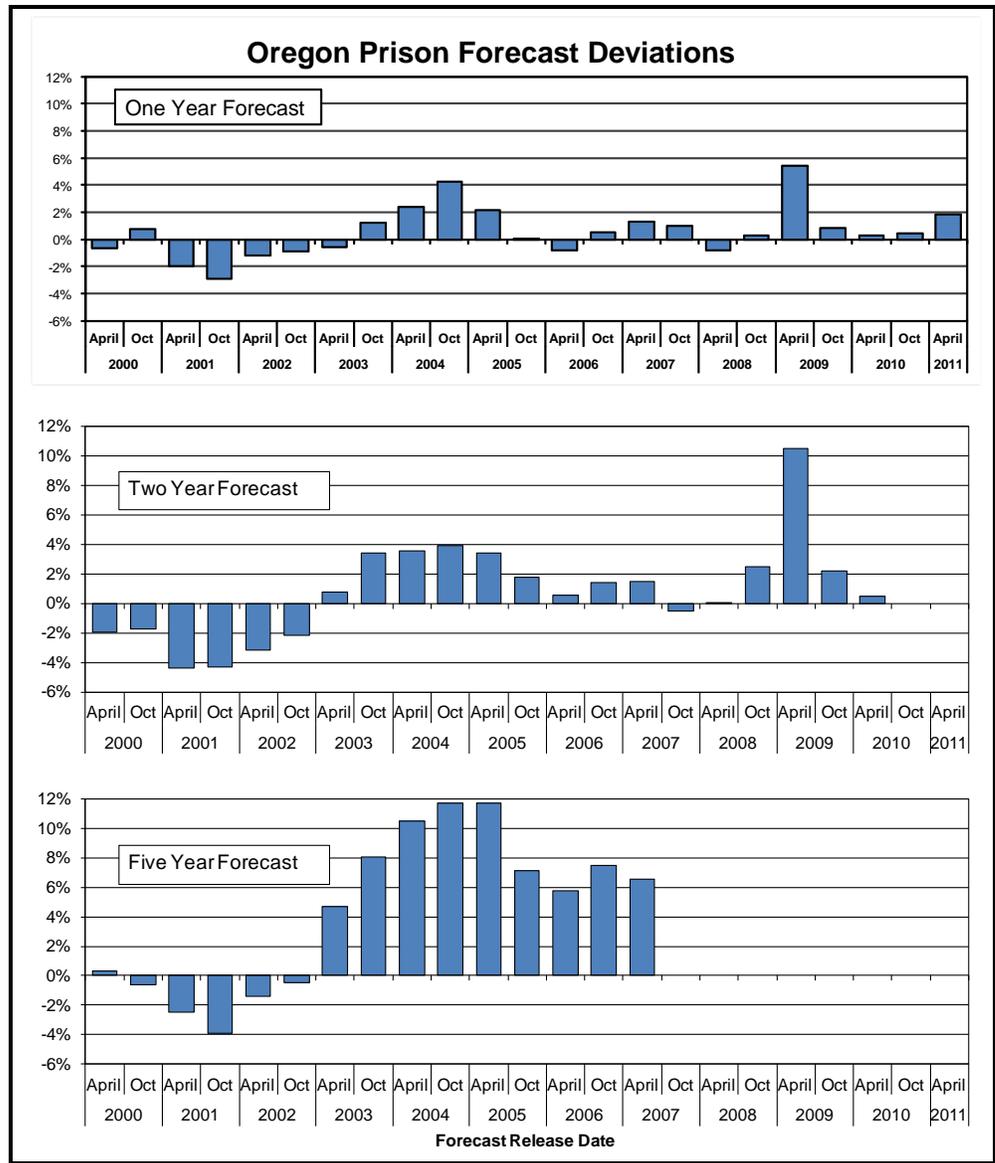
From 2006 to 2008, forecasts of prison population became increasingly accurate as the moderation of population growth became clear in the data and was reflected in the outlook. The baseline (net of new policy impacts) prison population forecast has been stable since this time.

The passage of Measure 57, which increased sentences for repeat property offenses and other crimes, led to a marked increase in the prison population forecast beginning in April 2009. In later forecasts, the initial impact estimates for Measure 57 were revised downward for two reasons. First, intakes and sentences associated with Measure 57 crimes during 2009

Forecast Release Date	Forecast Deviations		
	1 Year Forecast	2 Year Forecast	5 Year Forecast
Apr-00	-64	-218	44
Oct-00	79	-205	-75
Apr-01	-218	-518	-328
Oct-01	-334	-521	-517
Apr-02	-141	-397	-184
Oct-02	-105	-280	-60
Apr-03	-75	94	633
Oct-03	159	440	1,096
Apr-04	310	467	1,448
Oct-04	547	524	1,625
Apr-05	285	454	1,627
Oct-05	3	236	1,002
Oct-07	135	-77	922
Apr-08	-111	4	N/A
Oct-08	41	347	N/A
Apr-09	761	1,474	N/A
Oct-09	121	310	N/A
Apr-10	47	71	N/A
Oct-10	68	N/A	N/A
Apr-11	261	N/A	N/A

were observed to be smaller than expected in the initial impact estimates used in the voter's pamphlet. Also, implementation of Measure 57 was halted by policymakers until January 2012, leading to a sharp decline in the near-term population forecast.

After Measure 57 revisions were included in the October 2009 and April 2010 forecasts, there have been no significant changes to the prison population outlook. Little new information has become available since that time, with the prison population tracking close to the forecast. Going forward, new information will become available on Measure 57 this year, as crimes committed after January 2012 are once again subject to the new law. Also, Census 2010 population counts are now available to be incorporated into the prison population forecast.



Graph 3

All told, for the period from 2000 to 2012, the near-term prison population forecast has been reasonably accurate. Excluding the impact of major law changes (such as the suspension of M57 in 2010), when looking two years into the future, the forecast has remained within 4% of

the actual prison population. On average, the two-year-ahead forecast has overstated near-term population growth by less than 1%.

Of course, the further into the future we look, the greater degree of uncertainty exists. As such, significant changes have been seen in the long-term prison population forecast over time. In particular, the sharp moderation in prison population growth seen in the middle of the last decade has only recently been fully incorporated into the outlook. Since the slowdown was not fully anticipated, long-term forecasts produced in the 1990's and early 2000's tended to overstate the future prison population.

The current long-run prison population growth forecast calls for very modest growth by historical standards. This outlook is informed by the Corrections Population Forecasting Advisory Committee and represents the Office of Economic Analysis' best estimate of Oregon's future prison population. Although the population estimate is highly uncertain and subject to change over the extended horizon, the forecast is designed so that overestimates and underestimates of the future prison population are equally likely to occur.