



Oregon Youth Authority

Close Custody Demand Forecast

April 2005

Office of Economic Analysis

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Forecast Highlights

- The estimated demand for close custody beds grew 3.9 percent in 2004, from 1,009 on January 1, 2004 to 1,048 on January 1, 2005. Growth was driven by an increase in demand for discretionary beds and by an increase in the Public Safety Reserve population.
- The estimated bed demand of 1,048 on January 1, 2005 was 189 beds higher than the actual population (859) on that date. It was 109 beds lower than the highest historical population of 1,157 on August 1, 2000.
- Bed demand is forecast to increase 4.2 percent to 1,092 by July 1, 2005, the end of the current biennium.¹ It is forecast to grow 6.9 percent over the next biennium, reaching 1,167 by July 2007.
- Demand is expected to remain stable for the remainder of the 10-year forecast horizon. Demand of 1,193 beds is expected by January 2015. This is 2.2 percent higher than the forecast for July 1, 2007.
- The current forecast is 61 beds lower than the previous forecast for July 1, 2005. It is 32 beds lower than the previous forecast for July 1, 2007. Much of the difference is due to a one-time revision in the source data

used to determine the demand for discretionary beds.

What is Close Custody Demand?

The Oregon Youth Authority's (OYA) close custody population is comprised of three offender groups:

- Adult Court (AC) offenders who were under age 18 at the time of their crime, and who were convicted as adults under ORS 137.707 or ORS 419C.340.
- Public Safety Reserve (PSR) offenders as defined by OAR 416-410-0030.
- Discretionary Bed Allocation (DBA): the remaining close custody beds are allocated to counties or regions to use at their discretion (OAR 416-410-0050).

The total size of the DBA is highly dependent upon OYA's budget. Funding has dropped since 1999, culminating in the closure of 4 of 7 close custody facilities in 2003. The resulting size of the DBA has declined nearly 40 percent from an average of 620 in the 1999-2001 biennium to 383 in the current biennium.

A forecast of the actual size of the DBA is largely a reflection of the funding level. Therefore, we forecast the *demand* for discretionary beds. *Demand* consists of offenders in close custody and those with similar delinquency characteristics who remain in the community.

¹ Oregon's biennial budget period runs from July 1 through June 30 of odd-numbered years.

Figure 1: Total Close Custody Demand Forecast

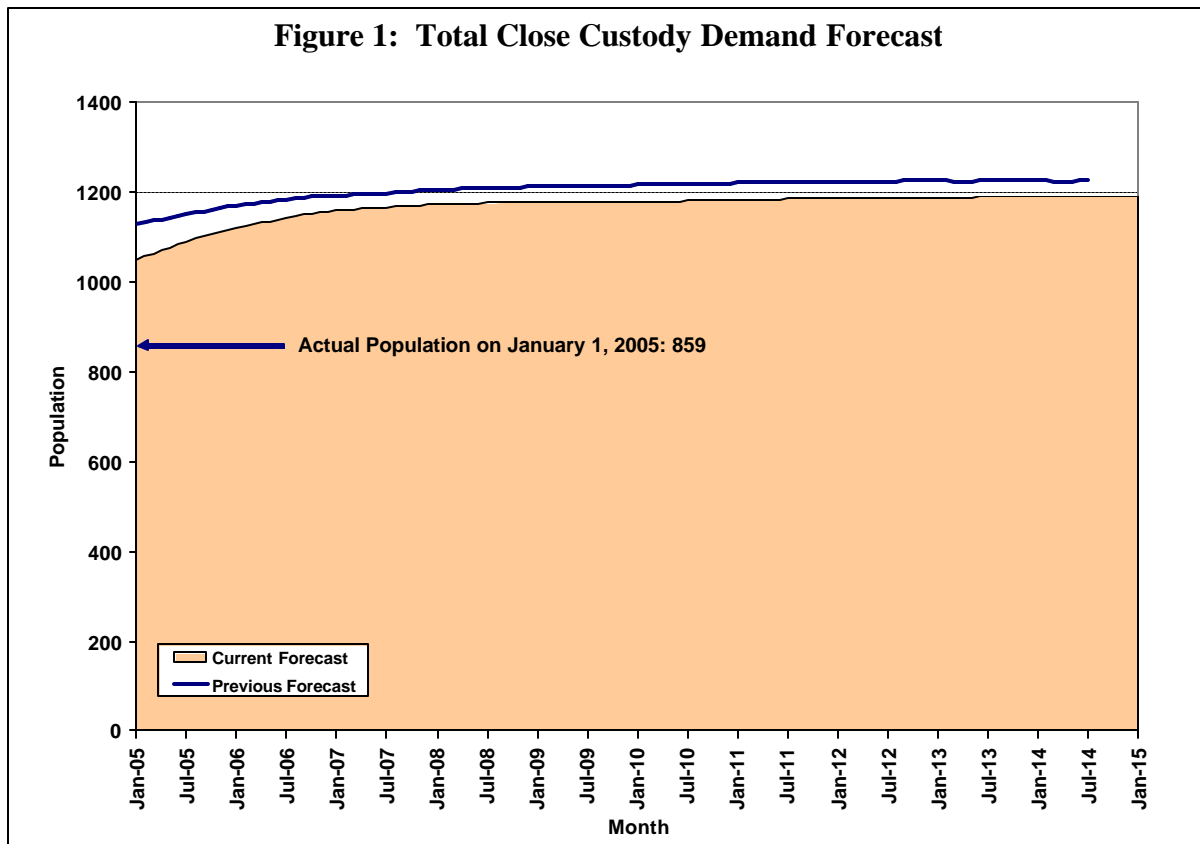


Table 1: Total Close-Custody Demand Forecast

	Current	Previous	Difference	Pct Diff.
Jan-05	1,048	1,129	-81	-7.2%
Jul-05	1,092	1,152	-61	-5.3%
Jul-06	1,143	1,185	-42	-3.6%
Jul-07	1,167	1,199	-32	-2.6%
Jul-08	1,177	1,211	-34	-2.8%
Jul-09	1,180	1,216	-36	-3.0%
Jul-10	1,182	1,218	-37	-3.0%
Jul-11	1,186	1,224	-38	-3.1%
Jul-12	1,189	1,226	-37	-3.0%
Jul-13	1,191	1,226	-35	-2.9%
Jul-14	1,192	1,226	-34	-2.8%
Jan-15	1,193			

Table 2: Total Demand Intake Growth Rates

Year	No. Intakes	Pct Chg
2001	1016	
2002	986	-3.0%
2003	849	-13.8%
2004	937	10.3%
2005*	1011	7.9%
2006	1023	1.1%
2007	1024	0.2%
2008	1021	-0.3%
2009	1016	-0.5%
2010	1015	-0.1%
2011	1018	0.3%
2012	1021	0.2%
2013	1022	0.1%
2014	1022	0.0%

*Forecast begins 2005

Defining DBA Demand

The Office of Economic Analysis (OEA) and the Juvenile Corrections Population Forecast Advisory Committee developed this forecast. Executive Order 04-02 charges the Committee with defining discretionary bed demand.

OEA uses a *binary choice model* to analyze the criminal characteristics of youths referred for criminal offenses between 1996 and 2002. The data come from the Juvenile Justice Information System (JJIS). Those

years were chosen by the Committee to reflect *average practice* by covering a period of increase and decrease in close custody capacity.

The model evaluates observable, quantifiable delinquency characteristics and determines which factors best explain the decision to place youths in close custody. The model computes a prediction score for each youth based on the selected characteristics.

The Committee selects minimum scores that define the *total demand population (TDP)*. TDP is the sum of two groups:

- *Mirror population*: youths who went to close custody as part of the DBA;
- *Scorers*: youths who remained in the community, but had the same delinquency characteristics as those in the DBA (based on the prediction score).

Characteristics of the TDP

Youths who ultimately become part of the total demand population (TDP) are a distinct subset of all juvenile arrestees:

- About one-third of youths ever referred are first referred at age 13 or younger, yet this group comprises nearly two-thirds of the TDP.
- For this core group of offenders, the average time between the first referral and entering the TDP is 39 months. By that time, these youths have been referred an average of 10 times.

The Committee uses two criteria for selecting minimum prediction scores:

- The overall mean score for the TDP should be the same as the mean score for the mirror population;
- The age distribution of the TDP should be similar to the age distribution of the mirror population.

The TDP is a small percentage all youths referred. Of the 89,405 youths either last referred or sent to OYA between 1996 and 2002, the Mirror Population comprised 3.4 percent (3,049) and Scorers another 1.1 percent (1,008).

Table 3 shows the composition of intake demand. Note that the percentage of Scorers increased as the number of actual DBA intakes decreased in 2003 and 2004.

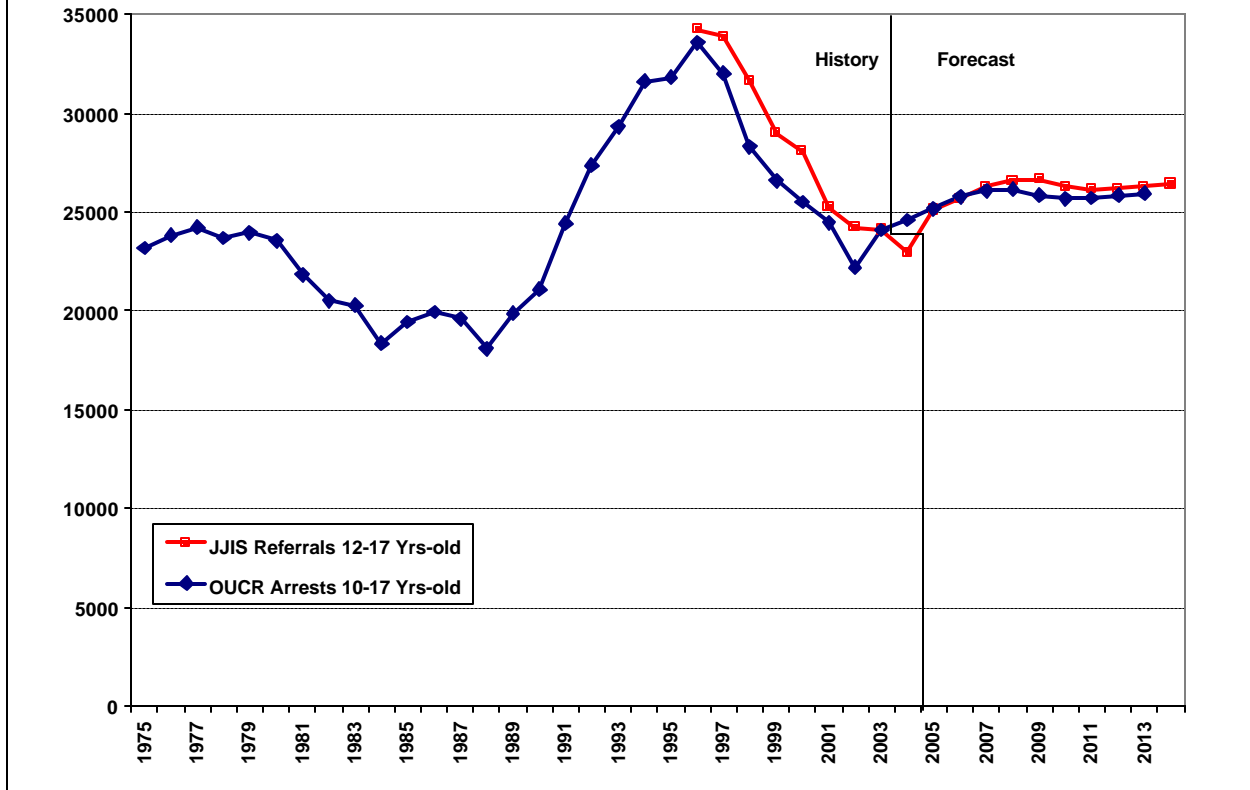
Year	DBA		Total	Pct Scorers
	Scorers	Intakes		
1996	141	434	575	24.5%
1997	169	502	671	25.2%
1998	176	466	642	27.4%
1999	139	465	604	23.0%
2000	145	443	588	24.7%
2001	119	367	486	24.5%
2002	119	372	491	24.2%
2003	128	235	363	35.3%
2004	150	283	433	34.6%

For detailed information on how this forecast was developed, see the methodology review available at our website, www.oea.das.state.or.us.

Juvenile Justice Trends

Figure 2 shows our forecast of referral and arrest rates that underlie the bed demand forecast. JJIS data consist of referrals entered by juvenile departments, and Oregon

Figure 2: Historical and Forecast Juvenile Arrests and Referrals



Uniform Crime Reports (OUCR) data are juvenile arrests compiled by police departments.

Both series show the decline in juvenile arrests since the mid-1990s. The JJIS forecast is based on the OUCR forecast. The latter covers a longer period and is a better basis for a forecast. Our referral forecast shows a slight and gradual increase over the current level. Little change in the number of 12 to 17 year olds and a slight increase in the juvenile referral rate are expected over the next decade.

Forecast Detail

Forecasts of the three offender groups that make up the total demand forecast follow.

Adult Court

Adult Court (AC) offenders are juveniles convicted in adult court under Measure 11 (ORS 137.707) or waived under ORS

419C.340. These offenders are in the legal custody of the Department of Corrections (DOC). Most spend at least some of their sentence in the physical custody of OYA.

Measure 11 (M 11) took effect in April 1995. Prior to this law, few juveniles were sent to adult court. Table 4 shows the growth in AC intakes immediately following M 11. Intakes then declined over several

Year	M11	Waived	Total	Pct. Change
1994	0	36	36	
1995	15	49	64	77.8%
1996	85	108	193	201.6%
1997	61	87	148	-23.3%
1998	56	105	161	8.8%
1999	49	104	153	-5.0%
2000	49	105	154	0.7%
2001	43	92	135	-12.3%
2002	36	73	109	-19.3%
2003	31	85	116	6.4%
2004	39	95	134	15.5%

years before increasing during 2003 and 2004. Consequently, the AC population dropped from 329 on January 1, 2002 to 284 on January 1, 2003, then increased to an average of 302 during 2004.

ORS 420.011 states that the OYA may house AC inmates until age 25, but few have stayed that long. About half of all M 11 inmates are returned to the DOC within four years of entering OYA. About half of waived inmates are returned or released within 18 months of entering OYA. The return of some inmates to DOC limits the growth in OYA's population.

Table 5 shows the AC forecast for the next decade. Table 6 shows intake growth rates. The January 2005 population of 299 is forecast to grow 3.3 percent to 309 by July 1, 2005, the end of the current biennium. It is forecast to grow 6.1 percent during the 2005-07 biennium, reaching 328 by July 2007.

Table 5: AC Population Forecast

	Current	Previous	Difference	Pct Diff.
Jan-05	299	318	-19	-5.9%
Jul-05	309	320	-11	-3.6%
Jul-06	324	324	0	0.1%
Jul-07	328	318	10	3.1%
Jul-08	329	322	8	2.5%
Jul-09	331	325	6	2.0%
Jul-10	332	325	6	2.0%
Jul-11	333	326	7	2.0%
Jul-12	334	326	7	2.2%
Jul-13	335	327	7	2.3%
Jul-14	336	328	8	2.4%
Jan-15	336			

This forecast is initially lower than the previous forecast due to an unanticipated number of releases and returns during fall 2004. The current forecast is slightly higher than the previous forecast after July 2006.

Table 6: AC Intakes and Growth Rates

Year	M11 Intakes	Waived Intakes	Total Growth Rate
2001	43	92	
2002	36	73	-19.3%
2003	31	85	6.4%
2004	39	95	15.5%
2005*	35	103	3.4%
2006	36	103	0.1%
2007	36	103	-0.1%
2008	36	103	0.1%
2009	36	103	0.3%
2010	36	103	0.1%
2011	36	104	0.1%
2012	36	104	0.2%
2013	36	104	0.1%
2014	36	104	0.0%

*Forecast begins 2005

Public Safety Reserve

The Public Safety Reserve (PSR) consists of youths committed for certain violent crimes.² Nearly all of these crimes are covered by M 11. Therefore, the PSR now applies mostly to youths aged 14 or younger at the time of their offense.

Table 7 shows how PSR intakes dropped after the inception of M 11 in 1995. Intakes dropped 36.2 percent in 1996, 16.5 percent in 1998, and 25.3 percent in 2001.

Table 7: Historical PSR Intakes

Year	No. Intakes	Pct Chg
1995	127	
1996	81	-36.2%
1997	79	-2.5%
1998	66	-16.5%
1999	81	22.7%
2000	79	-2.5%
2001	59	-25.3%
2002	64	8.5%
2003	67	4.7%
2004	94	40.3%

² Robbery I, Arson I, Murder, Attempted Murder, Unlawful Sexual Penetration I, Sodomy I, Rape I, Kidnap I, and Assault I.

PSR Intakes increased 40.3 percent during 2004, bringing them to their highest level since M 11's inception. The increase was driven by PSR offenders who returned to OYA on parole violations. The increase was not entirely unexpected. PSR releases averaged 69 annually between 1996 and 2002. Releases averaged 84 in 2003 and 2004, an increase of 21.5 percent. A parole violation increase will normally follow an increase in releases.

Table 8 shows the PSR forecast for the next decade. Table 9 shows intake growth rates. The January 1, 2005 population of 175 is forecast to grow 9.0 percent to 191 by the end of the next biennium, July 2007. The current PSR forecast is slightly higher than the previous forecast.

Table 8: PSR Population Forecast

	Current	Previous	Difference	Pct Diff.
Jan-05	175	177	-2	-1.0%
Jul-05	179	177	1	0.8%
Jul-06	183	179	5	2.7%
Jul-07	191	184	7	3.9%
Jul-08	195	185	10	5.5%
Jul-09	198	186	12	6.4%
Jul-10	201	188	13	6.8%
Jul-11	203	190	13	7.1%
Jul-12	204	190	14	7.3%
Jul-13	204	190	15	7.7%
Jul-14	204	189	15	7.9%
Jan-15	204			

Discretionary Bed Demand

The discretionary bed demand is the bed demand for new crime commitments and parole violations of offenders not part of the PSR or in DOC custody. Discretionary bed demand is comprised of the actual population of youths in the Discretionary Bed Allocation (DBA), plus those with similar delinquency characteristics that remain in the community.

Table 9: PSR Intake Growth Rates

Year	No. Admits	Pct Chg
2001	59	
2002	64	8.5%
2003	67	4.7%
2004	94	40.3%
2005*	89	-5.3%
2006	90	1.5%
2007	91	1.0%
2008	92	0.7%
2009	92	0.4%
2010	92	0.1%
2011	92	0.1%
2012	93	0.1%
2013	93	0.1%
2014	93	0.0%

*Forecast begins 2005

Table 10 shows the discretionary bed demand forecast. Table 11 shows intake growth rates. DBA demand for January 1, 2005 is estimated to be 574 beds. This is 189 beds higher than the actual population (385) on that date. It is 74 beds lower than the highest historical population of 648 in June 2000.

Table 10: DBA Demand Forecast

	Current	Previous	Difference	Pct Diff.
Jan-05	574	635	-61	-9.6%
Jul-05	604	655	-51	-7.7%
Jul-06	636	683	-47	-6.9%
Jul-07	648	697	-49	-7.0%
Jul-08	652	704	-52	-7.4%
Jul-09	651	705	-54	-7.7%
Jul-10	649	705	-56	-7.9%
Jul-11	650	708	-59	-8.3%
Jul-12	651	709	-58	-8.2%
Jul-13	652	709	-57	-8.1%
Jul-14	652	709	-57	-8.0%
Jan-15	652			

Demand is expected to grow 5.2 percent to 604 by the end of the current biennium, July 2005. It is expected to grow 7.4 percent during the 2005-07 biennium, reaching 648 by July 2007. Demand is forecast to remain stable thereafter.

Year	No. Admits	Pct Chg
2001	822	
2002	813	-1.1%
2003	666	-18.0%
2004	709	6.4%
2005*	784	10.5%
2006	794	1.3%
2007	795	0.1%
2008	790	-0.5%
2009	785	-0.7%
2010	784	-0.1%
2011	787	0.4%
2012	788	0.2%
2013	789	0.1%
2014	790	0.0%

*Forecast begins 2005

The forecast increases during the first two years as demand recovers from unusual circumstances in 2003. During that year, close custody capacity declined nearly 25 percent. In addition, budget cuts to the courts caused delays of up to four months for some types of cases. It is likely that these circumstances changed local practices and policies enough to suppress demand during 2003. Demand intakes began to recover in 2004 (see Table 3). The forecast assumes the increase will continue as practices revert to what was typical before 2003.

The current forecast is lower than the previous due to a one time revision in the source data. The updated JJIS referral and disposition file used in this forecast did not include about 3,700 referrals that were included in the files used for the previous two forecasts. These were referrals for which the allegation was “dismissed without prejudice.” The criminal characteristics that determine whether a youth becomes a *Scorer* include the number of prior referrals. Removing some referrals resulted in fewer *Scorers*.

Date	Actual Populations			Demand	
	Adult Court	Public Safety Res.	Discretionary Bed Allocation	DBA Demand	Percent Met
	Jan-03	284	181	582	613
Apr-03	299	176	402	582	69.1%
Jul-03	302	175	369	547	67.5%
Oct-03	296	165	373	550	67.8%
Jan-04	298	162	380	549	69.2%
Apr-04	302	170	402	552	72.8%
Jul-04	312	174	374	551	67.9%
Oct-04	293	183	389	566	68.7%
Jan-05	299	175	385	574	67.1%

Table 12 is a recap of the actual population and re-estimated demand from January 2003 to January 2005. The table shows the sudden drop in the discretionary population when the four youth correctional facilities closed in early 2003. OEA estimates that since July 2003 about 70 percent of the demand for discretionary beds has been met. Demand has increased 5 percent since July 2003.

Risks to the Forecast

AC offenders have long lengths of stay, so even a small increase in intakes can have a lasting effect on the population. The PSR increased 8 percent in 2004, fueled by 40 percent growth in intakes. There is a risk that these populations will grow beyond what was forecast, especially during 2005. When these populations increase, they occupy beds that would otherwise be part of the DBA.

The forecast demand for discretionary beds is based on average practice between 1996 and 2002. We did not include 2003 in the analysis of average practice because of that year’s unusual budget situation. State budget reductions affected bed supply, court processing, and juvenile crime prevention programs. Local funding for juvenile services was also reduced in many

communities. It is likely that these budget cuts caused changes in juvenile justice practices from enforcement to disposition.

The increase in demand that occurred in 2004 indicates that at least some of the disruption in 2003 was temporary. However, there is still the possibility that a model based on an earlier period may lose some of its predictive value in the future. OEA and the Advisory Committee will continue to monitor and evaluate the model.

OYA Close Custody Demand Forecast

Current vs. Previous Forecast

Date	Current	Previous	Difference	Date	Current	Previous	Difference
Jan-05	1,048	1,129	(81)	Jan-10	1,180	1,217	(37)
Feb-05	1,057	1,133	(76)	Feb-10	1,180	1,217	(37)
Mar-05	1,065	1,138	(73)	Mar-10	1,180	1,217	(37)
Apr-05	1,072	1,141	(69)	Apr-10	1,180	1,217	(37)
May-05	1,077	1,144	(67)	May-10	1,180	1,217	(37)
Jun-05	1,085	1,149	(64)	Jun-10	1,181	1,218	(37)
Jul-05	1,092	1,152	(61)	Jul-10	1,182	1,218	(37)
Aug-05	1,097	1,156	(59)	Aug-10	1,182	1,219	(37)
Sep-05	1,103	1,159	(56)	Sep-10	1,182	1,220	(38)
Oct-05	1,109	1,162	(54)	Oct-10	1,182	1,220	(38)
Nov-05	1,114	1,165	(52)	Nov-10	1,183	1,220	(38)
Dec-05	1,118	1,169	(50)	Dec-10	1,183	1,221	(38)
Jan-06	1,122	1,171	(49)	Jan-11	1,184	1,222	(38)
Feb-06	1,127	1,174	(47)	Feb-11	1,184	1,222	(38)
Mar-06	1,130	1,177	(47)	Mar-11	1,184	1,222	(38)
Apr-06	1,132	1,179	(46)	Apr-11	1,184	1,223	(39)
May-06	1,135	1,181	(46)	May-11	1,184	1,223	(39)
Jun-06	1,139	1,183	(44)	Jun-11	1,185	1,224	(39)
Jul-06	1,143	1,185	(42)	Jul-11	1,186	1,224	(38)
Aug-06	1,147	1,187	(41)	Aug-11	1,186	1,224	(38)
Sep-06	1,150	1,189	(39)	Sep-11	1,186	1,225	(38)
Oct-06	1,153	1,191	(38)	Oct-11	1,186	1,224	(38)
Nov-06	1,155	1,193	(37)	Nov-11	1,186	1,224	(38)
Dec-06	1,157	1,194	(37)	Dec-11	1,187	1,224	(38)
Jan-07	1,159	1,194	(35)	Jan-12	1,187	1,224	(37)
Feb-07	1,161	1,195	(34)	Feb-12	1,187	1,224	(37)
Mar-07	1,162	1,195	(33)	Mar-12	1,187	1,224	(37)
Apr-07	1,164	1,196	(33)	Apr-12	1,187	1,224	(37)
May-07	1,164	1,197	(32)	May-12	1,188	1,225	(37)
Jun-07	1,166	1,198	(32)	Jun-12	1,188	1,225	(37)
Jul-07	1,167	1,199	(32)	Jul-12	1,189	1,226	(37)
Aug-07	1,168	1,201	(32)	Aug-12	1,189	1,226	(37)
Sep-07	1,169	1,202	(33)	Sep-12	1,189	1,226	(37)
Oct-07	1,170	1,203	(33)	Oct-12	1,189	1,226	(37)
Nov-07	1,171	1,204	(32)	Nov-12	1,189	1,226	(37)
Dec-07	1,172	1,205	(33)	Dec-12	1,190	1,226	(36)
Jan-08	1,173	1,206	(33)	Jan-13	1,190	1,226	(36)
Feb-08	1,174	1,206	(32)	Feb-13	1,190	1,226	(36)
Mar-08	1,175	1,207	(33)	Mar-13	1,189	1,225	(36)
Apr-08	1,175	1,208	(34)	Apr-13	1,189	1,225	(36)
May-08	1,175	1,209	(34)	May-13	1,190	1,225	(36)
Jun-08	1,176	1,210	(34)	Jun-13	1,190	1,226	(36)
Jul-08	1,177	1,211	(34)	Jul-13	1,191	1,226	(35)
Aug-08	1,177	1,211	(34)	Aug-13	1,191	1,226	(35)
Sep-08	1,177	1,212	(34)	Sep-13	1,191	1,226	(35)
Oct-08	1,177	1,212	(35)	Oct-13	1,191	1,226	(35)
Nov-08	1,178	1,213	(35)	Nov-13	1,191	1,226	(35)
Dec-08	1,178	1,213	(36)	Dec-13	1,191	1,226	(35)
Jan-09	1,178	1,213	(35)	Jan-14	1,191	1,226	(35)
Feb-09	1,179	1,213	(34)	Feb-14	1,192	1,226	(34)
Mar-09	1,179	1,214	(36)	Mar-14	1,191	1,226	(34)
Apr-09	1,178	1,214	(36)	Apr-14	1,191	1,226	(34)
May-09	1,179	1,215	(37)	May-14	1,191	1,226	(34)
Jun-09	1,179	1,215	(36)	Jun-14	1,192	1,226	(34)
Jul-09	1,180	1,216	(36)	Jul-14	1,192	1,226	(34)
Aug-09	1,180	1,216	(36)	Aug-14	1,192		
Sep-09	1,180	1,217	(36)	Sep-14	1,192		
Oct-09	1,181	1,217	(36)	Oct-14	1,192		
Nov-09	1,180	1,217	(36)	Nov-14	1,192		
Dec-09	1,181	1,217	(36)	Dec-14	1,193		
				Jan-15	1,193		

Juvenile Corrections Population Forecast Advisory Committee

Mike Bullis
Dept. of Special Education & Comm.
Resources
University of Oregon
Eugene, OR 97403

Jeff Milligan
CEOJJC
P.O. Box 3155
Salem, OR 97302

Bob Jester
Director
Oregon Youth Authority
530 Center St NE #200
Salem, OR 97301

Honorable Tom Hart, Circuit Judge
Marion County Circuit Court
P.O. Box 12869
Salem, Oregon 97309-2676

*Joseph Christy
Director
Washington County Juvenile Dept.
222 N First Ave
Hillsboro OR 97124

Joanne Fuller
Director
Multnomah County Community Justice
501 SE Hawthorne Suite 250
Portland, OR 97214

*Committee Chair

The Office of Economic Analysis (OEA) resides in the Director's Office of the Department of Administrative Services. OEA produces and publishes the Oregon Youth Authority Close Custody Demand Forecast on a semi-annual basis, each April 1st and October 1st.

Staff:

Tom Potiowsky, State Economist
Dae Baek, Deputy State Economist
Michael Kennedy, Economist

Kanhaiya Vaidya, Senior Demographer
Suzanne Porter, Corrections Forecast Analyst
Suzanne Brean, Administrative Assistant

155 Cottage Street N.E., U20
Salem, OR 97301-3966

Phone: (503) 378-3405
Fax: (503) 373-7643

Website: www.oea.das.state.or.us