



# Oregon Youth Authority

## Close Custody Demand Forecast

### October 2004

Office of Economic Analysis

Volume 1 No. 2

#### Forecast Highlights

- The estimated demand for close custody beds grew by 1.2 percent in the first half of 2004, from 1,058 on January 1 to 1,071 on July 1, 2004. Much of the growth was driven by an increase in Adult Court (AC) and Public Safety Reserve offenders.
- The estimated bed demand of 1,071 on July 1, 2004 was 208 beds higher than the actual population (863) on that date. It was 86 beds lower than the highest historical population of 1,157 on August 1, 2000.
- Bed demand is forecast to increase by 7.6 percent to 1,152 by July 1, 2005, the end of the current biennium.<sup>1</sup> It is forecast to grow by 4 percent over the next biennium, reaching 1,199 by July 1, 2007.
- Little growth is forecast for the remainder of the 10-year horizon. Demand of 1,226 beds is expected on July 1, 2014. This is 2.3 percent higher than on July 1, 2007.
- The current forecast is 27 beds higher than the previous forecast for July 1, 2005. It is 63 beds higher than the previous forecast for July 1, 2007. This is due to a change in the AC forecast. Previously, we expected this population to decline over the next 3 years. We now expect it to remain stable over that period.

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

#### What is Close-Custody Demand?

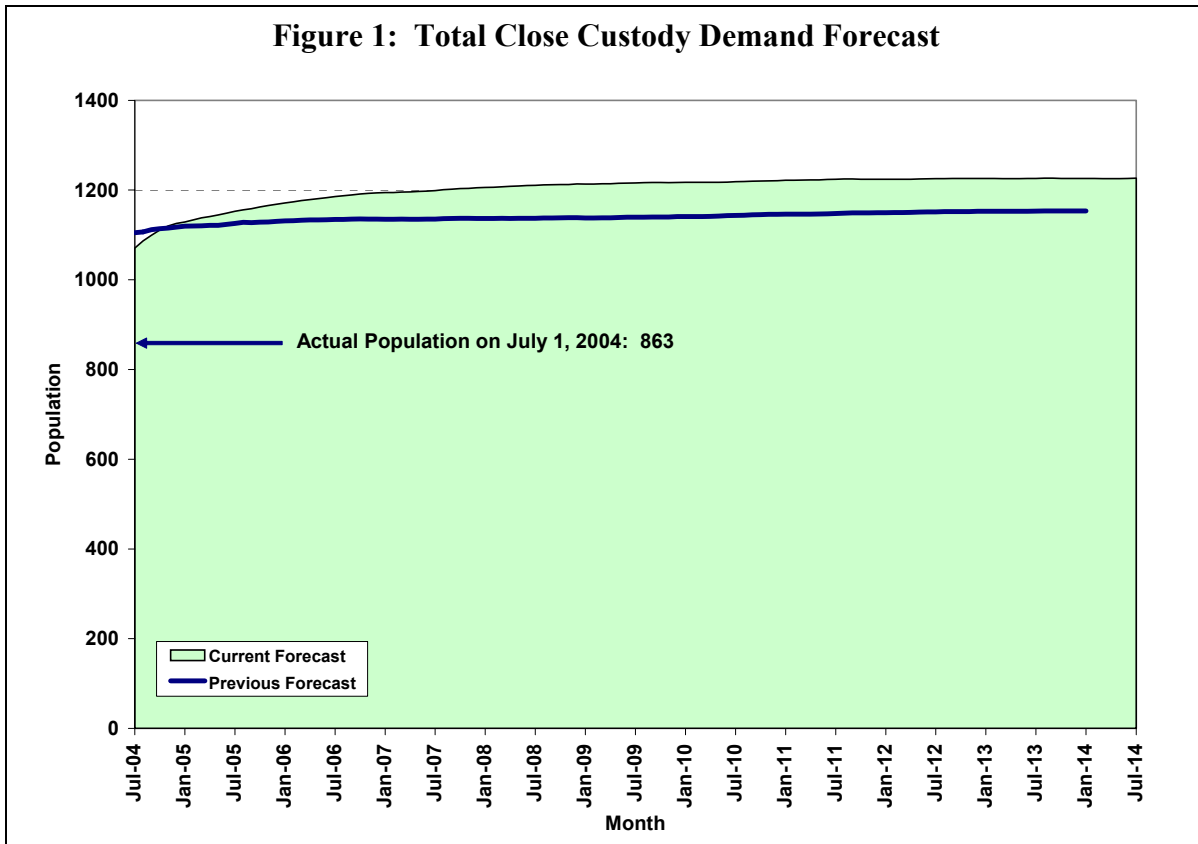
The Oregon Youth Authority's (OYA) close custody population is comprised of three offender groups:

- 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 by 40 percent from an average of 623 in the 1999-2001 biennium to 373 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 the DBA. *Demand* consists of offenders in close custody and those with similar delinquency characteristics that remain in the community.

**Figure 1: Total Close Custody Demand Forecast**



**Table 1: Total Close-Custody Demand Forecast**

	Current	Previous	Difference	Pct Diff.
Jul-04	1,071	1,105	-34	-3.1%
Jan-05	1,129	1,119	10	0.9%
Jul-05	1,152	1,126	27	2.4%
Jul-06	1,185	1,135	51	4.5%
Jul-07	1,199	1,136	63	5.6%
Jul-08	1,211	1,137	73	6.5%
Jul-09	1,216	1,139	76	6.7%
Jul-10	1,218	1,143	75	6.6%
Jul-11	1,224	1,148	76	6.7%
Jul-12	1,226	1,151	74	6.4%
Jul-13	1,226	1,153	73	6.3%
Jul-14	1,226			

**Table 2: Total Demand Intake Growth Rates**

FY	No. Intakes	Pct Chg
2001	1066	
2002	1018	-4.5%
2003	906	-11.0%
2004	942	3.9%
2005	1035	9.9%
2006	1054	1.9%
2007	1061	0.7%
2008	1063	0.2%
2009	1060	-0.2%
2010	1059	-0.1%
2011	1063	0.4%
2012	1065	0.2%
2013	1065	0.0%
2014	1065	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 DBA 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 computes a prediction score for each youth according to observable, quantifiable delinquency characteristics.

The Committee selects minimum scores with which we 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 40 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 92,231 youths referred between 1996 and 2002, the Mirror Population comprised 3.1 percent (2,901) and Scorers another 1.1 percent (1,004).

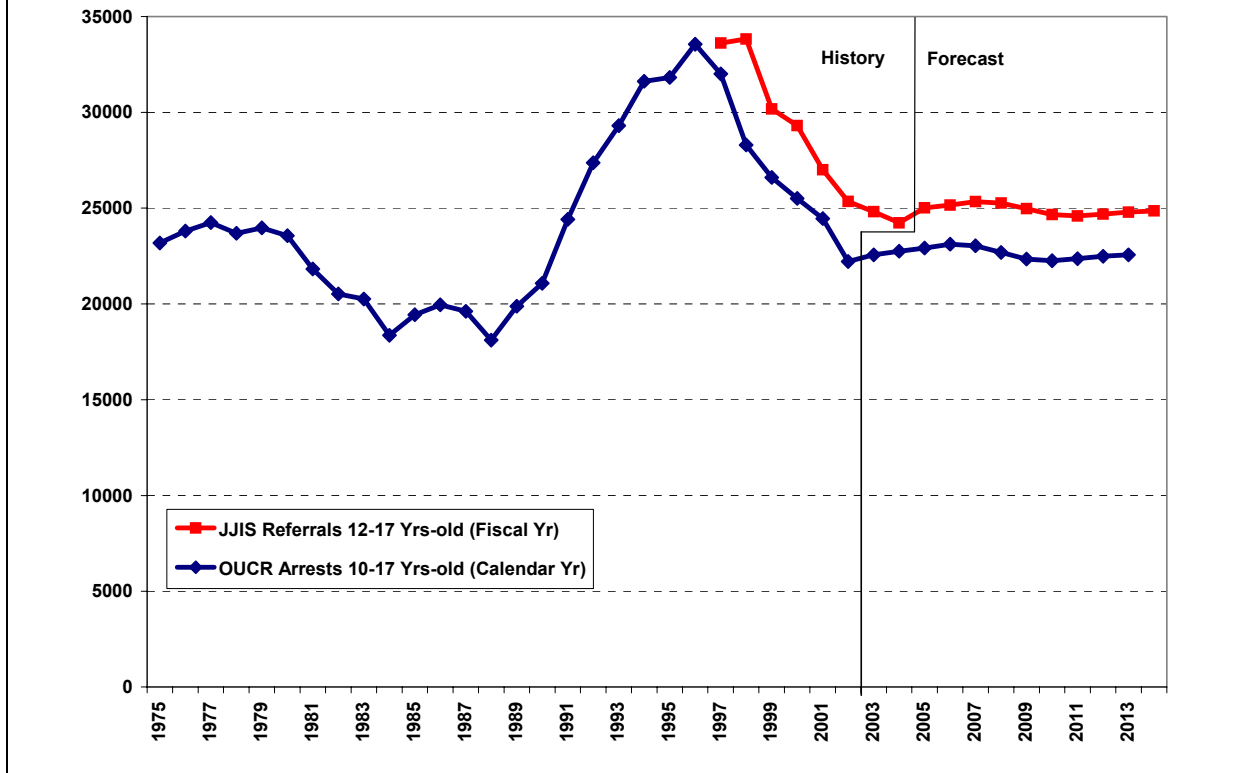
Table 3 shows the composition of intake demand. Note that the percentage of Scorers increased as the actual size of the DBA decreased in FY 2003 and 2004.

FY	DBA		Total	Pct
	Scorers	Intakes		Scorers
1996	150	411	561	26.7%
1997	173	491	664	26.1%
1998	164	466	630	26.0%
1999	144	490	634	22.7%
2000	149	463	612	24.3%
2001	116	399	515	22.5%
2002	121	373	494	24.5%
2003	122	265	387	31.5%
2004	156	280	436	35.8%

For detailed information on how this forecast was developed, see the methodology review available at our website, [www.oea.das.state.or.us](http://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 Uniform Crime Reports (OUCR) data are juvenile arrests compiled by police departments.

**Figure 2: Historical and Forecast Juvenile Arrests and Referrals**



Both series show the recent decline in juvenile arrests. The JJIS forecast is based on the OUCR forecast. The latter covers a longer period and is the better basis for a forecast. Our forecast of juvenile arrests shows little change over the current level. The slight increase over the first few years of the forecast is largely due to an expected increase in the population of 15 to 17 year olds.

**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 have declined by 20 percent

FY	M11	Waived	Total	Pct. Change
1995	0	44	44	
1996	59	85	144	227.3%
1997	69	105	174	20.8%
1998	55	102	157	-9.8%
1999	50	113	163	3.8%
2000	48	109	157	-3.7%
2001	44	89	133	-15.3%
2002	37	80	117	-12.0%
2003	34	87	121	3.4%
2004	39	91	130	7.4%

since FY 1999. Consequently, the AC population at OYA has dropped from 329 on January 1, 2002 to 312 on July 1, 2004.

ORS 420.011 states that the OYA may house AC inmates until age 25. 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 adult court forecast for the next decade. Table 6 shows intake growth rates. The July 2004 population of 312 is forecast to grow 2.7 percent to 320 by July 1, 2005, the end of the current biennium. It is forecast to remain steady through the 2005-07 biennium.

**Table 5: AC Population Forecast**

	Current	Previous	Difference	Pct Diff.
Jul-04	312	297	15	5.1%
Jan-05	318	294	24	8.2%
Jul-05	320	289	31	10.8%
Jul-06	324	280	44	15.5%
Jul-07	318	272	46	17.1%
Jul-08	322	269	52	19.3%
Jul-09	325	269	56	20.6%
Jul-10	325	269	56	20.9%
Jul-11	326	269	57	21.1%
Jul-12	326	271	56	20.6%
Jul-13	327	271	56	20.6%
Jul-14	328			

This forecast is higher than the previous forecast. The previous forecast called for a drop in AC population, while the current forecast calls for a stable AC population. Strong intake growth in early 2004 and a slight increase in length of stay contributed to the forecast change.

**Table 6: AC Intakes and Growth Rates**

FY	M11 Intakes	Waived Intakes	Total Growth Rate
2001	44	89	
2002	37	80	-12.0%
2003	34	87	3.4%
2004	39	91	7.4%
2005	43	92	4.4%
2006	44	93	0.2%
2007	44	93	0.0%
2008	44	92	-0.1%
2009	44	92	0.0%
2010	44	92	-0.2%
2011	43	92	-0.1%
2012	43	92	0.0%
2013	43	92	0.0%
2014	43	92	0.0%

Forecast begins 2005

### **Public Safety Reserve**

The Public Safety Reserve (PSR) consists of youths committed for certain violent crimes.<sup>2</sup> 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 FY 1995. Intakes dropped 28 percent in FY 1996, by more than 20 percent in the following two

**Table 7: Historical PSR Intakes**

FY	No. Intakes	Pct Chg
1995	126	
1996	91	-27.8%
1997	83	-8.8%
1998	72	-13.3%
1999	75	4.2%
2000	82	9.3%
2001	61	-25.6%
2002	66	8.2%
2003	71	7.6%
2004	76	7.0%

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

years, and by 26 percent in FY 2001. Increases during the last three years have brought the intakes up to the 1999 level.

The PSR population has increased in spite of the drop in intakes because the average length of stay (LOS) has more than doubled. The average LOS for a PSR offender was 14.0 months in FY 1995 and 31.7 months in FY 2004. Consequently, the population was 164 on July 1, 1995 and 174 on July 1, 2004.

Table 8 shows the PSR forecast for the next decade. Table 9 shows intake growth rates. The July 2004 population of 174 is forecast to grow gradually, increasing 5.5 percent by the end of the next biennium, July 2007. There is little difference between the current and previous forecasts.

**Table 8: PSR Population Forecast**

	Current	Previous	Difference	Pct Diff.
Jul-04	174	173	1	0.4%
Jan-05	177	178	-1	-0.4%
Jul-05	177	179	-1	-0.8%
Jul-06	179	182	-3	-1.9%
Jul-07	184	186	-2	-1.1%
Jul-08	185	186	-1	-0.4%
Jul-09	186	188	-2	-1.0%
Jul-10	188	190	-2	-1.0%
Jul-11	190	192	-2	-0.9%
Jul-12	190	192	-2	-1.2%
Jul-13	190	193	-3	-1.6%
Jul-14	189			

***Discretionary Bed Allocation Demand***

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

**Table 9: PSR Intake Growth Rates**

FY	No. Admits	Pct Chg
2001	61	
2002	66	8.2%
2003	71	7.6%
2004	76	7.0%
2005	79	4.6%
2006	81	1.9%
2007	82	0.9%
2008	82	0.6%
2009	83	0.3%
2010	82	0.0%
2011	82	-0.1%
2012	82	0.0%
2013	82	0.0%
2014	82	0.0%

Forecast begins 2005

Table 10 shows the DBA demand forecast. Table 11 shows intake growth rates. DBA demand of 585 is estimated for July 1, 2004. This is 208 beds higher than the actual population (377) on that date. It is 63 beds lower than the highest historical population of 648 in June 2000.

**Table 10: DBA Demand Forecast**

	Current	Previous	Difference	Pct Diff.
Jul-04	585	634	-50	-7.8%
Jan-05	635	648	-13	-2.1%
Jul-05	655	657	-3	-0.4%
Jul-06	683	672	11	1.6%
Jul-07	697	678	19	2.8%
Jul-08	704	682	22	3.2%
Jul-09	705	682	23	3.3%
Jul-10	705	684	21	3.0%
Jul-11	708	687	21	3.1%
Jul-12	709	688	21	3.0%
Jul-13	709	689	20	2.9%
Jul-14	709			

DBA demand is expected to grow by 11.9 percent to 655 by the end of the current biennium, July 2005. It is expected to grow by 6.5 percent during the 2005-07 biennium, reaching 697 by July 2007. Thereafter the forecast is stable, with little growth expected between July 2007 and July 2014.

<b>FY</b>	<b>No. Admits</b>	<b>Pct Chg</b>
2001	872	
2002	835	-4.3%
2003	714	-14.5%
2004	736	3.0%
2005	819	11.4%
2006	837	2.1%
2007	843	0.7%
2008	844	0.2%
2009	842	-0.3%
2010	841	-0.1%
2011	845	0.5%
2012	847	0.2%
2013	847	0.0%
2014	847	0.0%

Forecast begins 2005

The forecast increases most during the first three years as demand recovers from unusual circumstances of FY 2003. During that year, close-custody capacity declined by 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 FY 2003. Demand intakes began to recover in FY 2004 (see Table 3, above). The forecast assumes the increase will continue as practices revert to what was typical before FY 2003.

The current forecast is slightly higher than the previous forecast. This is due to a small increase in length of stay (LOS). LOS for this group is based on typical practice for actual DBA intakes during 1996 through 2002. Some of those offenders are still in close custody, causing the LOS to increase slightly.

### **Risks to the Forecast**

Adult Court and Public Safety Reserve offenders typically have long lengths of stay (LOS), so a slight increase in intakes will cause the population to grow. This is because there are few releases to offset an increase in intakes. An example of this occurred in the first half of 2004, when the AC and PSR populations increased by 4 percent. There is a risk that intakes for these groups will increase beyond what was forecast, causing higher growth in these populations. When these populations increase, they take up beds that would otherwise be part of the DBA.

The DBA demand forecast 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 forecast assumes at least some of these changes were temporary, and that parts of the juvenile system will return to practices that were typical from 1996 through 2002. If the changes are permanent, a model based on an earlier period may lose some of its predictive value. OEA and the Advisory Committee will monitor this situation and re-estimate the model as needed.

**OYA Close Custody Population Forecast**

Current vs. Previous Forecast							
Period	Current	Previous	Difference	Period	Current	Previous	Difference
Jul-04	1,071	1,105	(34)	Jul-09	1,216	1,139	76
Aug-04	1,087	1,107	(20)	Aug-09	1,216	1,140	77
Sep-04	1,099	1,112	(12)	Sep-09	1,217	1,140	77
Oct-04	1,111	1,114	(3)	Oct-09	1,217	1,140	77
Nov-04	1,120	1,115	4	Nov-09	1,217	1,140	76
Dec-04	1,126	1,118	8	Dec-09	1,217	1,141	76
Jan-05	1,129	1,119	10	Jan-10	1,217	1,141	77
Feb-05	1,133	1,120	14	Feb-10	1,217	1,141	77
Mar-05	1,138	1,120	18	Mar-10	1,217	1,141	76
Apr-05	1,141	1,121	19	Apr-10	1,217	1,141	76
May-05	1,144	1,121	23	May-10	1,217	1,142	75
Jun-05	1,149	1,124	25	Jun-10	1,218	1,143	75
Jul-05	1,152	1,126	27	Jul-10	1,218	1,143	75
Aug-05	1,156	1,128	28	Aug-10	1,219	1,144	75
Sep-05	1,159	1,128	31	Sep-10	1,220	1,145	75
Oct-05	1,162	1,129	34	Oct-10	1,220	1,145	75
Nov-05	1,165	1,129	36	Nov-10	1,220	1,146	75
Dec-05	1,169	1,130	38	Dec-10	1,221	1,146	75
Jan-06	1,171	1,131	40	Jan-11	1,222	1,146	76
Feb-06	1,174	1,132	42	Feb-11	1,222	1,146	76
Mar-06	1,177	1,133	44	Mar-11	1,222	1,146	76
Apr-06	1,179	1,134	45	Apr-11	1,223	1,146	76
May-06	1,181	1,133	47	May-11	1,223	1,147	76
Jun-06	1,183	1,134	50	Jun-11	1,224	1,147	77
Jul-06	1,185	1,135	51	Jul-11	1,224	1,148	76
Aug-06	1,187	1,134	53	Aug-11	1,224	1,149	76
Sep-06	1,189	1,135	54	Sep-11	1,225	1,149	76
Oct-06	1,191	1,136	55	Oct-11	1,224	1,149	75
Nov-06	1,193	1,136	57	Nov-11	1,224	1,149	75
Dec-06	1,194	1,135	59	Dec-11	1,224	1,149	75
Jan-07	1,194	1,135	59	Jan-12	1,224	1,149	75
Feb-07	1,195	1,135	60	Feb-12	1,224	1,150	74
Mar-07	1,195	1,136	60	Mar-12	1,224	1,150	74
Apr-07	1,196	1,135	61	Apr-12	1,224	1,150	74
May-07	1,197	1,135	62	May-12	1,225	1,151	74
Jun-07	1,198	1,135	62	Jun-12	1,225	1,151	74
Jul-07	1,199	1,136	63	Jul-12	1,226	1,151	74
Aug-07	1,201	1,136	65	Aug-12	1,226	1,152	74
Sep-07	1,202	1,137	65	Sep-12	1,226	1,152	74
Oct-07	1,203	1,137	66	Oct-12	1,226	1,152	74
Nov-07	1,204	1,137	67	Nov-12	1,226	1,152	74
Dec-07	1,205	1,137	68	Dec-12	1,226	1,153	73
Jan-08	1,206	1,137	70	Jan-13	1,226	1,153	73
Feb-08	1,206	1,137	70	Feb-13	1,226	1,153	73
Mar-08	1,207	1,137	70	Mar-13	1,225	1,152	73
Apr-08	1,208	1,137	71	Apr-13	1,225	1,152	73
May-08	1,209	1,137	72	May-13	1,225	1,153	73
Jun-08	1,210	1,137	73	Jun-13	1,226	1,153	73
Jul-08	1,211	1,137	73	Jul-13	1,226	1,153	73
Aug-08	1,211	1,137	74	Aug-13	1,226	1,153	73
Sep-08	1,212	1,138	74	Sep-13	1,226	1,154	73
Oct-08	1,212	1,138	74	Oct-13	1,226	1,154	72
Nov-08	1,213	1,138	74	Nov-13	1,226	1,154	72
Dec-08	1,213	1,139	75	Dec-13	1,226	1,154	72
Jan-09	1,213	1,138	75	Jan-14	1,226	1,154	72
Feb-09	1,213	1,138	76	Feb-14	1,226		
Mar-09	1,214	1,138	76	Mar-14	1,226		
Apr-09	1,214	1,138	76	Apr-14	1,226		
May-09	1,215	1,139	76	May-14	1,226		
Jun-09	1,215	1,139	76	Jun-14	1,226		
				Jul-14	1,226		



## 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 1<sup>st</sup> and October 1<sup>st</sup>.

Staff:

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

Kanhaiya Vaidya, Senior Demographer  
Sue Porter, Corrections Forecast Analyst

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](http://www.oea.das.state.or.us)