Oregon Youth Authority Close Custody Demand Forecast October 2005

Office of Economic Analysis   **Volume II No. 2**

Forecast Highlights

➢ The estimated demand for close custody beds grew 1.6 percent in Fiscal Year 2005, from 1,068 on July 1, 2004 to 1,085 on July 1, 2005. Growth was driven by an increase in demand for discretionary beds for youth referred for person crimes.

➢ The estimated bed demand of 1,085 on July 1, 2005 was 227 beds higher than the actual population (858) on that date. It was 72 beds lower than the highest historical population of 1,157 on August 1, 2000.

➢ Bed demand is forecast to increase 4.0 percent to 1,128 by July 1, 2007, the end of the current biennium.[1] It is forecast to remain stable over the next biennium, with demand of 1,125 forecast for July 2009.

➢ Little growth is expected for the remainder of the 10-year forecast horizon. Demand of 1,145 beds is expected by July 2015. This is 1.8 percent higher than the forecast for July 1, 2009.

➢ The current forecast is 39 beds lower than the previous forecast for July 1, 2007. It is 55 beds lower than the previous forecast for July 1, 2009.

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1 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 nearly 40 percent from an average of 620 in the 1999-2001 biennium to 383 in the 2003-05 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.
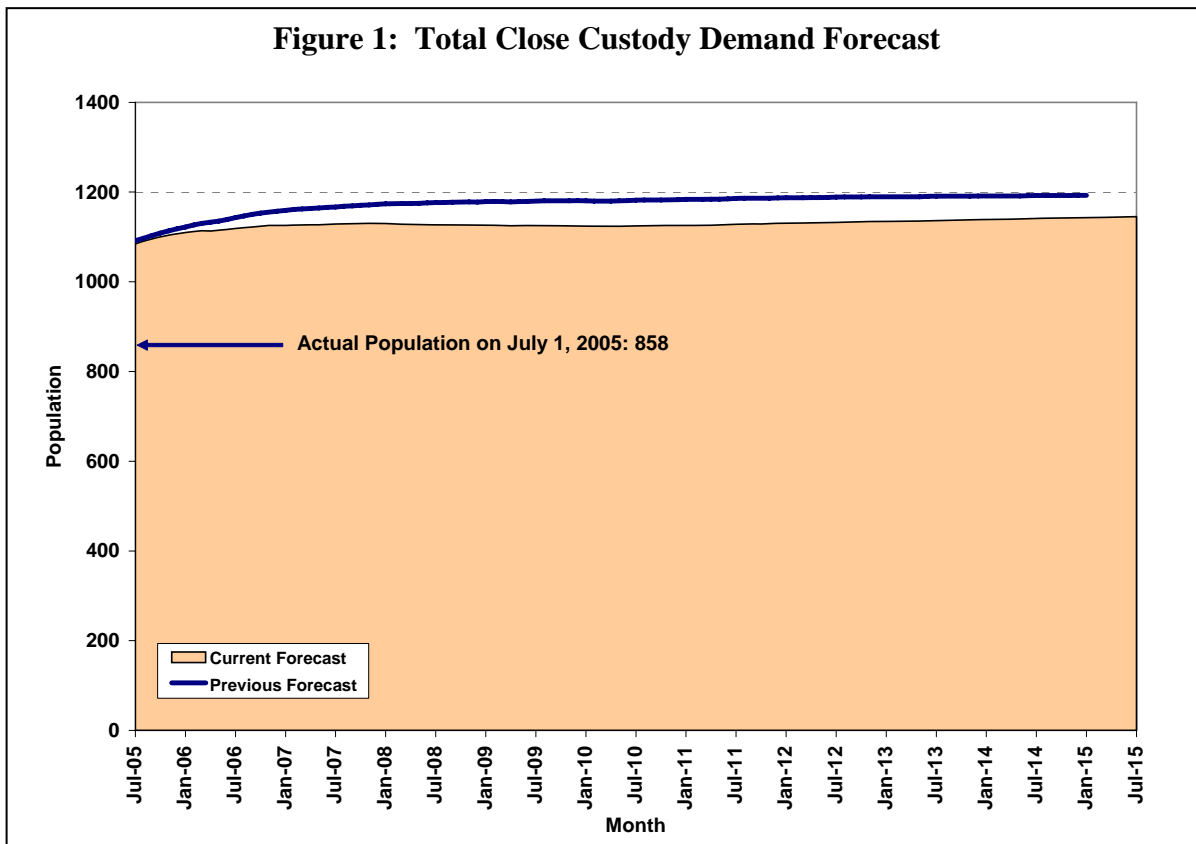
Figure 1: Total Close Custody Demand Forecast

Table 1: Total Close-Custody Demand Forecast				
Date	**Current**	**Previous**	**Difference**	**Pct Diff.**
Jul-05	1,085	1,092	-7	-0.6%
Jul-06	1,119	1,143	-24	-2.1%
Jul-07	1,128	1,167	-39	-3.3%
Jul-08	1,127	1,177	-49	-4.2%
Jul-09	1,125	1,180	-55	-4.6%
Jul-10	1,124	1,182	-57	-4.8%
Jul-11	1,128	1,186	-58	-4.9%
Jul-12	1,132	1,189	-56	-4.7%
Jul-13	1,137	1,191	-54	-4.5%
Jul-14	1,141	1,192	-51	-4.3%
Jul-15	1,145			
Total Growth	61	5.6%		

Columns and rows may not add to total due to rounding

Table 2: Total Demand Intakes And Growth Rates		
FY	No. Intakes	Pct Chg
2002	1102	
2003	1005	-8.8%
2004	971	-3.4%
2005	977	0.6%
2006	1016	4.0%
2007	1004	-1.1%
2008	992	-1.2%
2009	982	-1.0%
2010	977	-0.5%
2011	978	0.1%
2012	982	0.4%
2013	986	0.4%
2014	990	0.4%
2015	993	0.3%

*Forecast begins 2006

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 two-thirds of the TDP.

➢ For this core group of offenders, the average time between the first referral and entering the TDP is 38 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 88,977 youths either last referred or sent to OYA between 1996 and 2002, the Mirror Population comprised 3.4 percent (3,048) and Scorers another 1.3 percent (1,181). Table 3 shows the composition of intake demand.

Table 3
Composition of Total Demand Intakes

FY	Scorers	DBA Intakes	Total	Pct Scorers
1997	196	492	688	28.5%
1998	210	466	676	31.1%
1999	166	492	658	25.2%
2000	182	464	646	28.2%
2001	135	398	533	25.3%
2002	124	374	498	24.9%
2003	127	265	392	32.4%
2004	129	279	408	31.6%
2005	144	289	433	33.3%

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 forecasts 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
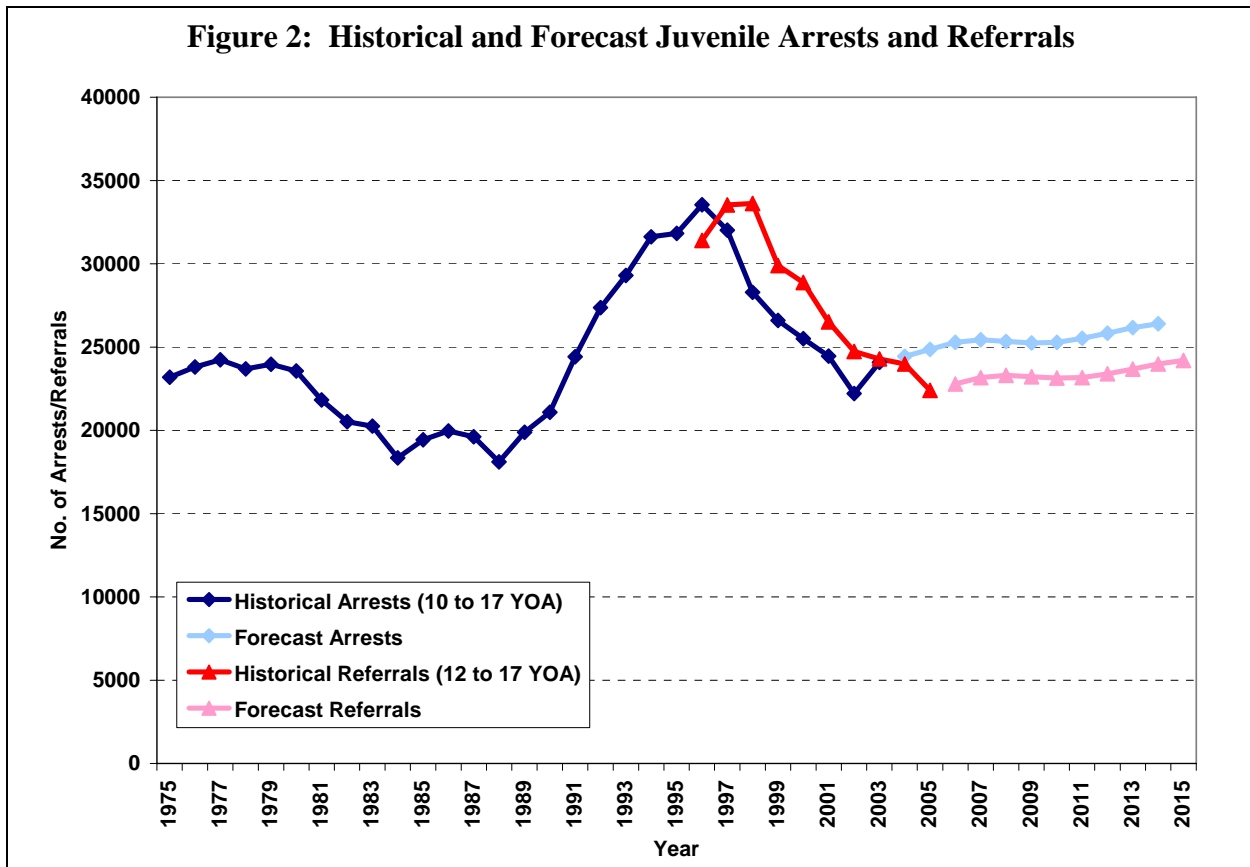
Both series show the decline in juvenile arrests since the mid-1990s. The JJIS forecast is based on the OUCR forecast. The latter covers a longer period and is a better basis for a forecast. Our referral forecast shows a slight and gradual increase over the current level. Little change in the number 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

Table 4
Measure 11 and Waived Intakes

FY	M11	Waived	Total	Pct. Change
1995	1	40	41	
1996	60	77	137	234.1%
1997	70	102	172	25.5%
1998	55	102	157	-8.7%
1999	50	112	162	3.2%
2000	49	107	156	-3.7%
2001	44	89	133	-14.7%
2002	37	80	117	-12.0%
2003	35	87	122	4.3%
2004	40	90	130	6.6%
2005	35	105	140	7.7%

M 11. Intakes then declined over several years before increasing beginning in FY 2003.

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 July 2005 population of 314 is forecast to grow 3.6 percent to 325 by July 1, 2007, the end of the current biennium. It is expected to remain stable during the 2007-2009 biennium. There is little change in the current forecast compared to the previous forecast.

Table 5: AC Population Forecast				
Date	Current	Previous	Difference	Pct Diff.
Jul-05	314	309	5	1.6%
Jul-06	323	324	-1	-0.3%
Jul-07	325	328	-2	-0.8%
Jul-08	325	329	-4	-1.4%
Jul-09	327	331	-5	-1.4%
Jul-10	328	332	-3	-1.0%
Jul-11	331	333	-2	-0.5%
Jul-12	333	334	-1	-0.2%
Jul-13	335	335	0	0.0%
Jul-14	337	336	1	0.3%
Jul-15	338			
Total Growth	24	7.7%		

Public Safety Reserve
The Public Safety Reserve (PSR) consists of youths committed for certain violent crimes.[2] Nearly all of these crimes are

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

Table 6: AC Intakes and Growth Rates			
FY	M11 Intakes	Waived Intakes	Total Growth Rate
2002	37	80	
2003	35	87	4.3%
2004	40	90	6.6%
2005	35	105	7.7%
2006	40	106	4.3%
2007	40	106	0.0%
2008	40	105	-0.7%
2009	40	105	0.0%
2010	40	106	0.7%
2011	40	106	0.0%
2012	41	107	1.4%
2013	41	107	0.0%
2014	41	108	0.7%
2015	41	108	0.0%

*Forecast begins 2006

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 42.9 percent between FY 1995 and FY 1998 and by another 24.4 percent in FY 2001. In recent years, PSR intakes have increased to the level seen in the late 1990s.

Table 7: Historical PSR Intakes		
FY	No. Intakes	Pct Chg
1995	126	
1996	90	-28.6%
1997	85	-5.6%
1998	72	-15.3%
1999	74	2.8%
2000	82	10.8%
2001	62	-24.4%
2002	64	3.2%
2003	71	10.9%
2004	78	9.9%
2005	78	0.0%

Table 8: PSR Population Forecast				
Date	Current	Previous	Difference	Pct Diff.
Jul-05	173	179	-6	-3.3%
Jul-06	173	183	-11	-5.7%
Jul-07	176	191	-15	-7.9%
Jul-08	178	195	-17	-8.9%
Jul-09	179	198	-19	-9.5%
Jul-10	180	201	-21	-10.5%
Jul-11	182	203	-22	-10.8%
Jul-12	182	204	-22	-10.7%
Jul-13	182	204	-22	-10.7%
Jul-14	183	204	-22	-10.5%
Jul-15	184			
Total Growth	11	6.2%		

Table 9: PSR Intake Growth Rates		
FY	No. Admits	Pct Chg
2002	64	
2003	71	10.9%
2004	78	9.9%
2005	78	0.0%
2006	82	5.2%
2007	81	-0.7%
2008	81	-0.2%
2009	81	0.2%
2010	82	0.3%
2011	82	0.2%
2012	82	0.2%
2013	82	0.3%
2014	83	0.4%
2015	83	0.4%

*Forecast begins 2006

Table 8 shows the PSR forecast for the next decade. Table 9 shows intake growth rates. The July 1, 2005 population of 173 is forecast to remain fairly stable through the next two biennia. The current forecast is lower than the previous forecast due to a decrease in expected intakes.

Discretionary Bed Demand
The 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. The DBA consists of new crime commitments and parole violations of offenders not part of the PSR or in DOC custody.

Table 10 shows the discretionary bed demand forecast. Table 11 shows intake growth rates. DBA demand for July 1, 2005 is estimated to have been 598 beds. This is 227 beds higher than the actual population (371) on that date. It is 50 beds lower than the highest historical population of 648 in June 2000.

Demand is expected to grow 5.0 percent to 627 by the end of the current biennium, July 2007. Demand is forecast to remain fairly stable thereafter.

Table 10: DBA Demand Forecast				
Date	Current	Previous	Difference	Pct Diff.
Jul-05	598	604	-6	-1.0%
Jul-06	623	636	-13	-2.0%
Jul-07	627	648	-21	-3.2%
Jul-08	625	652	-27	-4.2%
Jul-09	619	651	-31	-4.8%
Jul-10	616	649	-33	-5.1%
Jul-11	616	650	-34	-5.2%
Jul-12	617	651	-34	-5.2%
Jul-13	620	652	-32	-4.9%
Jul-14	621	652	-31	-4.7%
Jul-15	623			
Total Growth	26	4.3%		

The forecast increases during the first two years as demand continues to recover from unusual circumstances in FY 2003. During that year, close custody capacity declined nearly 25 percent. Demand intakes have been steadily increasing since then (see Table 3). The forecast assumes the increase will continue as practice reverts toward what was typical prior to FY 2003.

The current forecast is slightly lower than the previous forecast due to a decrease in expected intakes. This is caused in part by the continued decrease in referrals through the end of FY 2005 (see Figure 2).

Table 11: DBA Demand Intake Growth Rates		
FY	No. Admits	Pct Chg
2002	921	
2003	812	-11.9%
2004	763	-6.0%
2005	759	-0.5%
2006	787	3.7%
2007	777	-1.3%
2008	765	-1.5%
2009	755	-1.3%
2010	749	-0.7%
2011	750	0.1%
2012	753	0.4%
2013	756	0.4%
2014	759	0.4%
2015	761	0.3%

*Forecast begins 2006

Table 12: Historical Population and Demand					
	Actual Populations			Demand	
Date	Adult Court	Public Safety Res.	Discretionary Bed Allocation	DBA Demand	Percent Met
Jan-03	284	186	576	665	86.7%
Jul-03	300	180	326	592	55.2%
Jan-04	299	168	376	599	62.7%
Jul-04	312	172	375	584	64.2%
Jan-05	304	178	376	602	62.5%
Jul-05	314	173	371	598	62.1%

Table 12 is a recap of the actual population and estimated demand from January 2003 to July 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 63 percent of the demand for discretionary beds has been met. DBA

demand has increased 2.4 percent since July 2004.

Risks to the Forecast

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 has occurred since FY 2003 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
Jul-05	1,085	1,092	(7)	Jul-10	1,124	1,182	(57)
Aug-05	1,090	1,097	(7)	Aug-10	1,125	1,182	(57)
Sep-05	1,096	1,103	(7)	Sep-10	1,125	1,182	(57)
Oct-05	1,100	1,109	(8)	Oct-10	1,125	1,182	(57)
Nov-05	1,104	1,114	(10)	Nov-10	1,125	1,183	(57)
Dec-05	1,108	1,118	(11)	Dec-10	1,126	1,183	(57)
Jan-06	1,109	1,122	(13)	Jan-11	1,126	1,184	(57)
Feb-06	1,112	1,127	(14)	Feb-11	1,126	1,184	(58)
Mar-06	1,114	1,130	(16)	Mar-11	1,126	1,184	(58)
Apr-06	1,113	1,132	(20)	Apr-11	1,126	1,184	(58)
May-06	1,115	1,135	(20)	May-11	1,126	1,184	(58)
Jun-06	1,117	1,139	(22)	Jun-11	1,127	1,185	(58)
Jul-06	1,119	1,143	(24)	Jul-11	1,128	1,186	(58)
Aug-06	1,121	1,147	(26)	Aug-11	1,129	1,186	(57)
Sep-06	1,122	1,150	(28)	Sep-11	1,129	1,186	(57)
Oct-06	1,124	1,153	(29)	Oct-11	1,129	1,186	(57)
Nov-06	1,126	1,155	(30)	Nov-11	1,130	1,186	(57)
Dec-06	1,126	1,157	(31)	Dec-11	1,130	1,187	(57)
Jan-07	1,126	1,159	(33)	Jan-12	1,131	1,187	(57)
Feb-07	1,126	1,161	(35)	Feb-12	1,131	1,187	(56)
Mar-07	1,127	1,162	(35)	Mar-12	1,131	1,187	(56)
Apr-07	1,127	1,164	(37)	Apr-12	1,131	1,187	(56)
May-07	1,127	1,164	(37)	May-12	1,131	1,188	(56)
Jun-07	1,128	1,166	(38)	Jun-12	1,132	1,188	(56)
Jul-07	1,128	1,167	(39)	Jul-12	1,132	1,189	(56)
Aug-07	1,129	1,168	(39)	Aug-12	1,133	1,189	(56)
Sep-07	1,129	1,169	(40)	Sep-12	1,133	1,189	(56)
Oct-07	1,130	1,170	(40)	Oct-12	1,134	1,189	(55)
Nov-07	1,130	1,171	(41)	Nov-12	1,134	1,189	(55)
Dec-07	1,130	1,172	(42)	Dec-12	1,135	1,190	(55)
Jan-08	1,130	1,173	(44)	Jan-13	1,135	1,190	(55)
Feb-08	1,129	1,174	(45)	Feb-13	1,135	1,190	(55)
Mar-08	1,128	1,175	(46)	Mar-13	1,135	1,189	(55)
Apr-08	1,128	1,175	(47)	Apr-13	1,135	1,189	(55)
May-08	1,127	1,175	(47)	May-13	1,135	1,190	(55)
Jun-08	1,128	1,176	(48)	Jun-13	1,136	1,190	(54)
Jul-08	1,127	1,177	(49)	Jul-13	1,137	1,191	(54)
Aug-08	1,127	1,177	(50)	Aug-13	1,137	1,191	(54)
Sep-08	1,126	1,177	(51)	Sep-13	1,137	1,191	(54)
Oct-08	1,126	1,177	(51)	Oct-13	1,138	1,191	(53)
Nov-08	1,127	1,178	(51)	Nov-13	1,138	1,191	(53)
Dec-08	1,126	1,178	(52)	Dec-13	1,138	1,191	(53)
Jan-09	1,126	1,178	(52)	Jan-14	1,139	1,191	(53)
Feb-09	1,126	1,179	(53)	Feb-14	1,139	1,192	(52)
Mar-09	1,125	1,179	(54)	Mar-14	1,139	1,191	(52)
Apr-09	1,125	1,178	(53)	Apr-14	1,139	1,191	(52)
May-09	1,125	1,179	(53)	May-14	1,140	1,191	(52)
Jun-09	1,125	1,179	(54)	Jun-14	1,141	1,192	(51)
Jul-09	1,125	1,180	(55)	Jul-14	1,141	1,192	(51)
Aug-09	1,125	1,180	(55)	Aug-14	1,142	1,192	(51)
Sep-09	1,125	1,180	(56)	Sep-14	1,142	1,192	(50)
Oct-09	1,125	1,181	(56)	Oct-14	1,142	1,192	(50)
Nov-09	1,125	1,180	(56)	Nov-14	1,143	1,192	(50)
Dec-09	1,125	1,181	(56)	Dec-14	1,143	1,193	(49)
Jan-10	1,124	1,180	(56)	Jan-15	1,143	1,193	(49)
Feb-10	1,124	1,180	(56)	Feb-15	1,143		
Mar-10	1,124	1,180	(56)	Mar-15	1,143		
Apr-10	1,123	1,180	(57)	Apr-15	1,144		
May-10	1,123	1,180	(57)	May-15	1,144		
Jun-10	1,124	1,181	(57)	Jun-15	1,145		
				Jul-15	1,145		

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