

# **NORTH CAROLINA SENTENCING AND POLICY ADVISORY COMMISSION**

## **JUVENILE DELINQUENT POPULATION PROJECTIONS FISCAL YEAR 2010/11 to FISCAL YEAR 2014/15**

RELEASED: FEBRUARY 2011

### **INTRODUCTION**

North Carolina General Statutes 164-40(b) and 164-42.1(b) direct the North Carolina Sentencing and Policy Advisory Commission to prepare annual projections of the juvenile delinquent population and help assess North Carolina's long-term resource needs for juvenile dispositions. The projections are prepared in conjunction with the North Carolina Department of Juvenile Justice and Delinquency Prevention (DJJD). It is important to note that the juvenile justice system is largely policy-driven; therefore, any change in policy and/or practice with regard to the use of dispositional resources greatly influences the accuracy of the resource projections.

The following analysis was completed in two parts. The first part is based on 6,707 juveniles with a new delinquent disposition in FY 2009/10 (the new population) extracted from the North Carolina Juvenile Online Information Network (NC-JOIN), DJJD's management information system. The second part of the analysis includes juveniles committed to a Youth Development Center<sup>1</sup> (YDC) on July 1, 2010 – the beginning of the projection period. This is called the “stock” population. The projections take into account the decline of the committed “stock” population and the buildup of the new YDC population (new adjudicated delinquent dispositions, probation revocations, and post-release supervision revocations). The Juvenile Disposition Chart forms the basis of the projections (*see Table 1*).

**TABLE 1  
JUVENILE DISPOSITION CHART**

OFFENSE CLASSIFICATION	DELINQUENCY HISTORY LEVEL		
	LOW 0 – 1 points	MEDIUM 2 – 3 points	HIGH 4 or more points
<b>VIOLENT</b> Class A-E felonies	Level 2 or 3	Level 3	Level 3
<b>SERIOUS</b> Class F-I felonies Class A1 misdemeanors	Level 1 or 2	Level 2	Level 2 or 3
<b>MINOR</b> Class 1, 2, 3 misdemeanors	Level 1	Level 1 or 2	Level 2

<sup>1</sup> Throughout this document, any reference to the YDC population includes juveniles on-campus and off-campus (e.g., home visit, community commitment, hospitalization, escape).

## METHOD AND ASSUMPTIONS

### Projections Method

The simulation model used to produce resource projections relies on historical data and other empirical information about how juveniles are processed through the juvenile justice system. The model simulates releases for the stock population while simultaneously processing YDC admissions (through Level 3 commitments or revocations of probationary supervision) to produce the population projections.

Producing the final resource projections is a two-stage process: 1) the “reality check” stage and 2) the projection stage. In the “reality check” stage, the reliability of the data assumptions (e.g., commitment rates, revocation rates, length of stay) is tested by using the model to produce the past fiscal year’s admissions to YDCs. In essence, the model is used to reproduce reality. Once the model successfully approximates the past fiscal year’s YDC admissions, the second stage of the process begins. In the second stage, growth rates for the number of juvenile delinquent adjudications and stock population data are added to the model, thereby producing the five-year population projections.

Changes in the juvenile justice system that affect the number of YDC admissions, the number of YDC releases, or the YDC length of stay – all critical factors in projecting YDC population – directly impact the accuracy of the projections. With a system that is largely policy-driven, it is important to note that these changes also can be the result of changes in policy and/or practice with regard to the use of dispositional resources.

### Assumptions for the Projections

The projections are based on the following assumptions that were determined using empirical data from the most recent fiscal year (FY 2009/10):

- The projections assume no growth for the first two years and one percent annual growth in the rate for the remaining three years of the five-year projection. The estimated growth is based on census projections for North Carolina’s youth population and several juvenile justice indicators. Population projections prepared by North Carolina’s State Demographics Unit show that the juvenile population (age 6 – 15) in the state is expected to increase at an average annual rate of 1.5% over the next five years.<sup>2</sup> Although the youth population has been growing and is projected to continue to grow, recent data show declining trends in juvenile crime.<sup>3</sup>

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<sup>2</sup> Source: [www.demog.state.nc.us](http://www.demog.state.nc.us).

<sup>3</sup> There has been a decline in the rate of delinquent complaints since the late 1990s. In FY 1996/97 the rate of delinquent complaints was 54 per 1,000 juveniles compared to a rate of 29 in FY 2009/10. (Source: DJDP.) In addition, the State Bureau of Investigation reports that from 2005 to 2009, there was a 25% drop in overall arrests for index crimes committed by juveniles under the age of 16. (Source: *Crime in North Carolina-2009 Annual Summary Report of Uniform Crime Reporting Data*, NC Department of Justice, State Bureau of Investigation, [www.sbi2.jus.state.nc.us/crp/public/default.htm](http://www.sbi2.jus.state.nc.us/crp/public/default.htm).) Criminal complaints (Class A-I felonies and Class A1-3 misdemeanors) decreased 8% from CY 2008 to CY 2009. (Source: DJDP.)

- The five-year projections assume no change in judicial or prosecutorial behavior.
- Over the projection period, the rates of Level 1, Level 2, and Level 3 dispositions for juveniles adjudicated delinquent are assumed to match the rates during FY 2009/10 (62.1%, 35.0%, and 2.9%, respectively).
- YDC length of stay is assumed to match the average length of stay by offense classification for juveniles released during FY 2009/10. The average length of stay was 15.5 months for juveniles adjudicated delinquent for a violent offense, 13.2 months for juveniles adjudicated delinquent for a serious offense, and 8.7 months for juveniles adjudicated delinquent for a minor offense. The average length of stay for juveniles committed to YDC due to a technical violation of post-release supervision was 10 months.
- Over the projection period, the proportion of admissions to YDCs resulting from technical violations (i.e., not revocations due to new complaints) of probation will match the proportion found during FY 2009/10 (35.9%).
- This projection does not account for any potential increases or decreases in the YDC population from legislative changes that occurred during the past legislative session or from policy-driven changes implemented by DJJDP in the recent past since there are no historical data to estimate the potential impact of such decisions.

## **FY 2009/10 JUVENILE DELINQUENT DISPOSITIONS**

Table 2 shows the distribution of the 6,707 juveniles adjudicated delinquent by the offense classification of the most serious adjudicated offense and the delinquency history level of the juvenile adjudicated. Of the juveniles adjudicated delinquent in FY 2009/10, 2.4% were adjudicated for a violent offense, 26.8% were adjudicated for a serious offense, and 70.8% were adjudicated for a minor offense. Almost 71% of the dispositions involved a juvenile with a low delinquency history level, 15.3% involved a juvenile with a medium delinquency history level, and 13.9% involved a juvenile with a high delinquency level. Of the 6,707 juveniles with a new delinquent disposition, slightly more than half ( $n=3,592$ ) involved a juvenile with a low delinquency history level adjudicated for a minor offense (Class 1, 2, or 3 misdemeanor).

Table 3 summarizes dispositions imposed in FY 2009/10 by offense classification of the most serious adjudicated offense. In applying the dispositional chart, the court imposed a Level 3 disposition (Commitment to a YDC) in 2.9% of the cases, ordered Level 2 (Intermediate) dispositions in 35.0% of the cases, and ordered the remaining 62.1% of the cases to Level 1 (Community) dispositions. Of the 6,707 juveniles with a new delinquent disposition, over half ( $n=3,654$ ) involved a juvenile adjudicated for a minor offense who received a community level disposition.

**TABLE 2**  
**DISTRIBUTION OF CASES BY OFFENSE CLASSIFICATION AND**  
**DELINQUENCY HISTORY LEVEL**  
**JUVENILES ADJUDICATED DELINQUENT**

OFFENSE CLASSIFICATION	DELINQUENCY HISTORY LEVEL			<b>TOTAL</b>
	<b>LOW</b> 0 – 1 point	<b>MEDIUM</b> 2 – 3 points	<b>HIGH</b> 4+ points	
<b>VIOLENT</b> Class A-E felonies	106 (66.7%)	17 (10.7%)	36 (22.6%)	159 (2.4%)
<b>SERIOUS</b> Class F-I felonies Class A1 misdemeanors	1,053 (58.6%)	331 (18.4%)	414 (23.0%)	1,798 (26.8%)
<b>MINOR</b> Class 1, 2, 3 misdemeanors	3,592 (75.6%)	678 (14.3%)	480 (10.1%)	4,750 (70.8%)
<b>TOTAL</b>	4,751 (70.8%)	1,026 (15.3%)	930 (13.9%)	6,707 (100.0%)

**TABLE 3**  
**DISTRIBUTION OF CASES BY OFFENSE CLASSIFICATION**  
**AND DISPOSITION LEVEL**  
**JUVENILES ADJUDICATED DELINQUENT**

OFFENSE CLASSIFICATION	DISPOSITION LEVEL			<b>TOTAL</b>
	<b>LEVEL 1</b> Community	<b>LEVEL 2</b> Intermediate	<b>LEVEL 3</b> Commitment	
<b>VIOLENT</b> Class A-E felonies	4 (2.5%)	100 (62.9%)	55 (34.6%)	159 (2.4%)
<b>SERIOUS</b> Class F-I felonies Class A1 misdemeanors	508 (28.2%)	1,165 (64.8%)	125 (7.0%)	1,798 (26.8%)
<b>MINOR</b> Class 1, 2, 3 misdemeanors	3,654 (76.9%)	1,081 (22.8%)	15 (0.3%)	4,750 (70.8%)
<b>TOTAL</b>	4,166 (62.1%)	2,346 (35.0%)	195 (2.9%)	6,707 (100.0%)

SOURCE: NC Sentencing and Policy Advisory Commission, FY 2009/10 Disposition Simulation Data

Table 4 combines the information contained in Table 2 and Table 3, showing how judges used dispositional resources given each combination of offense classification and delinquency history level. Along with the data for the “stock” population, these data form the basis of the five-year resource projections. As indicated by the vertical “Total” column, the likelihood of the imposition of a Level 3 YDC commitment increased as the seriousness of the offense classification increased. Similarly, the likelihood of the imposition of a Level 3 YDC commitment increased as the delinquency history level increased.

There were 190 juveniles (2.8%) with a disposition not specified by the dispositional chart. However, it must be noted that certain provisions of the juvenile code allow a judge to impose dispositions other than those specified by the chart. Under G.S. 7B-2508(e), judges may find “extraordinary needs” and impose a lower level disposition. Under G.S. 7B-2508(g), juveniles adjudicated delinquent for a minor offense with four or more prior adjudications may be committed to a YDC. Finally, under G.S. 7B-2508(d), juveniles adjudicated delinquent for a minor offense with a previous Level 3 disposition may be committed to a YDC. These dispositions were used in the projections, as imposed, to guarantee the accuracy of the projections.

## **YDC COMMITTED POPULATION**

### **YDC Population on July 1, 2010**

The committed population or “stock” is the number of juveniles committed to a YDC at the beginning of the projection period, which is July 1, 2010, for the current projection. Stock population is an important component of the model as it represents the starting point of the projection. On July 1, 2010, there were 442 juveniles committed to a YDC. Seventy-seven percent of the juveniles had a high delinquency history level. The majority (87.6%) of the committed juveniles were adjudicated with a felony as their most serious offense. Of the juveniles committed to a YDC on July 1, 2010, 66.5% were adjudicated for a serious offense, 29.6% were adjudicated for a violent offense, and 3.9% were adjudicated for a minor offense.

**TABLE 4**  
**DISTRIBUTION OF CASES BY THE DISPOSITIONAL CHART**  
**JUVENILES ADJUDICATED DELINQUENT**

OFFENSE CLASSIFICATION	DELINQUENCY HISTORY LEVEL			TOTAL
	LOW 0 – 1 point	MEDIUM 2 – 3 points	HIGH 4+ points	
<b>VIOLENT</b> Class A-E felonies	<b>Level 2/Level 3</b> Level 1: 4 (3.8%) Level 2: 80 (75.5%) Level 3: 22 (20.7%) n = 106	<b>Level 3</b> Level 1: 0 (0.0%) Level 2: 12 (70.6%) Level 3: 5 (29.4%) n = 17	<b>Level 3</b> Level 1: 0 (0.0%) Level 2: 8 (22.2%) Level 3: 28 (77.8%) n = 36	Level 1: 4 (2.5%) Level 2: 100 (62.9%) Level 3: 55 (34.6%) n = 159 (2.4%)
<b>SERIOUS</b> Class F-I felonies Class A1 misdemeanors	<b>Level 1/Level 2</b> Level 1: 471 (44.7%) Level 2: 582 (55.3%) Level 3: 0 (0.0%) n = 1,053	<b>Level 2</b> Level 1: 32 (9.7%) Level 2: 292 (88.2%) Level 3: 7 (2.1%) n = 331	<b>Level 2/Level 3</b> Level 1: 5 (1.2%) Level 2: 291 (70.3%) Level 3: 118 (28.5%) n = 414	Level 1: 508 (28.2%) Level 2: 1,165 (64.8%) Level 3: 125 (7.0%) n = 1,798 (26.8%)
<b>MINOR</b> Class 1, 2, 3 misdemeanors	<b>Level 1</b> Level 1: 3,496 (97.3%) Level 2: 96 (2.7%) Level 3: 0 (0.0%) n = 3,592	<b>Level 1/Level 2</b> Level 1: 147 (21.7%) Level 2: 531 (78.3%) Level 3: 0 (0.0%) n = 678	<b>Level 2</b> Level 1: 11 (2.3%) Level 2: 454 (94.6%) Level 3: 15 (3.1%) n = 480	Level 1: 3,654 (76.9%) Level 2: 1,081 (22.8%) Level 3: 15 (0.3%) n = 4,750 (70.8%)
<b>TOTAL</b>	Level 1: 3,971 (83.6%) Level 2: 758 (15.9%) Level 3: 22 (0.5%) n = 4,751 (70.8%)	Level 1: 179 (17.4%) Level 2: 835 (81.4%) Level 3: 12 (1.2%) n = 1,026 (15.3%)	Level 1: 16 (1.7%) Level 2: 753 (81.0%) Level 3: 161 (17.3%) n = 930 (13.9%)	Level 1: 4,166 (62.1%) Level 2: 2,346 (35.0%) Level 3: 195 (2.9%) n = 6,707 (100.0%)

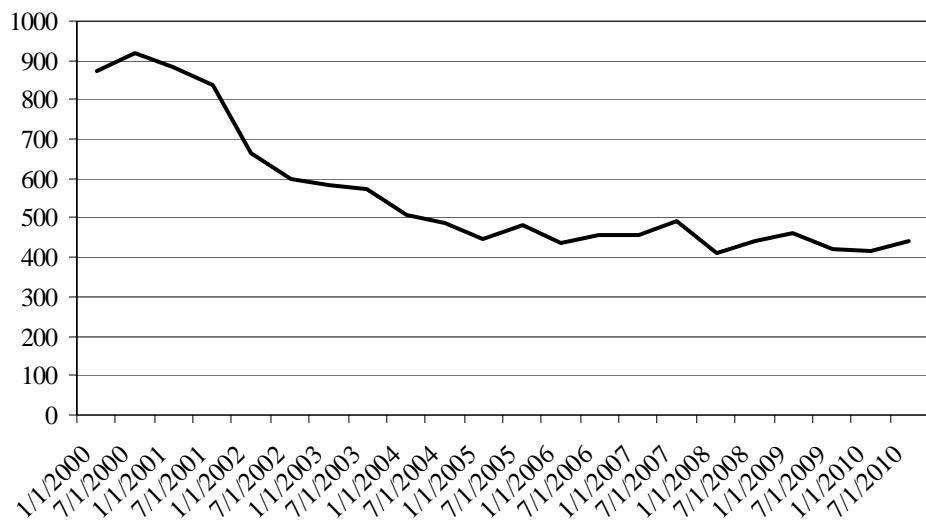
SOURCE: NC Sentencing and Policy Advisory Commission, FY 2009/10 Disposition Simulation Data

**NOTE:** In FY 2009/10, there were 190 juveniles (or 2.8%) with a disposition not specified by the dispositional chart. However, it must be noted that certain provisions of the juvenile code allow a judge to impose a disposition other than those specified by the chart. Under G.S. 7B-2508(e), judges may find "extraordinary needs" and impose a lower level disposition. Under G.S. 7B-2508(g), juveniles adjudicated delinquent for a minor offense with four or more prior adjudications may be committed to a YDC. Finally, under G.S. 7B-2508(d), juveniles adjudicated delinquent for a minor offense with a previous Level 3 disposition may be committed to a YDC.

## **Historical YDC Population Trends**

As intended by the Juvenile Justice Reform Act of 1998, the YDC population has declined since July 2000 (*see Figure 1*). The next section discusses the factors that contribute to this trend.

**FIGURE 1**  
**YOUTH DEVELOPMENT CENTER (YDC) POPULATION TRENDS**  
**JANUARY 2000 – JULY 2010**



SOURCE: NC Department of Juvenile Justice and Delinquency Prevention

## **YDC ADMISSIONS,<sup>4</sup> RELEASES, AND LENGTH OF STAY TRENDS**

As previously mentioned, changes in the juvenile justice system that affect the number of YDC admissions, the number of YDC releases, or the YDC length of stay – all critical factors in projecting the YDC population – directly impact the accuracy of the projections. The following section highlights YDC statistics showing the year-to-year variations in several key components used to produce the projections.

### **YDC Admissions**

From FY 2000/01 to FY 2009/10, there has been a 51% decrease in the number of YDC admissions. (*See Table 5.*) As intended by the Juvenile Justice Reform Act of 1998, much of the initial decrease in YDC admissions can be attributed to the fact that juveniles adjudicated delinquent for a Class 1, Class 2 or Class 3 misdemeanor, except under certain rare conditions, cannot be committed to a YDC. Pre-reform, misdemeanor offenders accounted for about 40% of annual admissions to YDCs. By FY 2009/10, juveniles adjudicated of a minor offense (Class 1, 2, or 3 misdemeanors) who were admitted to a YDC accounted for 6% of annual admissions.

<sup>4</sup> The term YDC admission refers to a Level 3 disposition or YDC commitment (whether on-campus or off-campus).

YDC admissions decreased nearly 2% from FY 2008/09 to FY 2009/10, continuing the overall decreasing trend in the number of YDC admissions since FY 2001/02. In FY 2009/10, there was an average of 33 admissions per month.

### **YDC Releases**

As the YDC admissions decreased from FY 2000/01 to FY 2009/10, YDC releases also decreased (57%). (See Table 5.) In general, releases exceeded admissions for most of those years. From FY 2008/09 to FY 2009/10, there was a 10% decrease in the number of YDC releases. In FY 2009/10, the average number of releases per month was 32.

**TABLE 5**  
**YOUTH DEVELOPMENT CENTER (YDC) ADMISSIONS AND RELEASES**  
**JUVENILES ADJUDICATED DELINQUENT**

<b>Fiscal Year</b>	<b>YDC ADMISSIONS</b>			<b>YDC RELEASES</b>		
	<b>Total Number</b>	<b>Percent Change</b>	<b>Average Number Per Month</b>	<b>Total Number</b>	<b>Percent Change</b>	<b>Average Number Per Month</b>
<b>2000/01</b>	806	--	67	883	--	74
<b>2001/02</b>	583	-27.7	49	825	-6.6	69
<b>2002/03</b>	569	-2.4	47	577	-30.1	48
<b>2003/04</b>	469	-17.6	39	548	-5.0	46
<b>2004/05</b>	473	0.9	39	470	-14.2	39
<b>2005/06</b>	448	-5.3	37	479	1.9	40
<b>2006/07</b>	470	4.9	39	420	-12.3	35
<b>2007/08</b>	450	-4.3	38	499	18.8	42
<b>2008/09</b>	401	-10.9	33	422	-15.4	35
<b>2009/10</b>	395	-1.5	33	378	-10.4	32

SOURCE: NC Department of Juvenile Justice and Delinquency Prevention

It is important to note that the number of admissions and releases is extremely sensitive to changes in policies and practices. Looking at the average number of YDC admissions and releases per month over the past five years, admissions appear to experience less fluctuations than releases. These trends will continue to be monitored to help assess the accuracy of the resource projections.

## **YDC Length of Stay**

Over the past few years, the length of stay for the largest group of juveniles entering YDCs – those adjudicated delinquent for a serious offense – has been fairly stable; however, there was an increase in the YDC length of stay for FY 2009/10. (See Table 6.) For juveniles adjudicated delinquent for a serious offense, who represented 72% of YDC admissions in FY 2009/10, the average length of stay was 12.7 months – almost a month and a half increase from FY 2008/09. From FY 2005/06 to FY 2007/08, the average length of stay for juveniles adjudicated for a violent offense declined from 17.6 months to 14.2 months; however, the average length of stay for this group increased in both FY 2008/09 and FY 2009/10, with a 4% increase in the length of stay (from 14.9 months to 15.5 months). For juveniles adjudicated delinquent of a minor offense, the average length of stay decreased each year from FY 2005/06 to FY 2008/09. In FY 2009/10, there was an increase in the YDC length of stay to an average of 8.7 months for this group.

**TABLE 6**  
**AVERAGE YOUTH DEVELOPMENT CENTER (YDC)**  
**LENGTH OF STAY (IN MONTHS)**  
**FOR RELEASED JUVENILES ADJUDICATED DELINQUENT**

<b>Juveniles Adjudicated of a:</b>	<b>Fiscal Year</b>					<b>% Change</b>	
	<b>2005/06</b>	<b>2006/07</b>	<b>2007/08</b>	<b>2008/09</b>	<b>2009/10</b>	<b>FY 2008/09 to FY 2009/10</b>	<b>FY 2005/06 to FY 2009/10</b>
<b>Violent Offense</b>	17.6	17.2	14.2	14.9	15.5	4.0	-11.9
<b>Serious Offense</b>	11.8	11.5	11.9	11.2	12.7	13.4	7.6
<b>Minor Offense</b>	11.2	8.9	8.0	6.4	8.7	35.9	-22.3
<b>Overall</b>	13.2	12.5	12.2	11.7	13.2	12.8	--

SOURCE: NC Department of Juvenile Justice and Delinquency Prevention

## **PROJECTED JUVENILE DELINQUENT POPULATIONS<sup>5</sup>**

Table 7 shows the projected Level 3 resource needs over the five-year projection period.<sup>6</sup> Level 3 resource needs are projected to increase slightly over the period, with a projected need for 404 YDC beds by June 2011 and 413 YDC beds by June 2015. The YDC population was 442 on July 1, 2010. On January 1, 2011, the YDC population was 390.

**TABLE 7  
LEVEL 3 COMMITMENT RESOURCE PROJECTIONS:  
JUVENILES ADJUDICATED DELINQUENT  
*RELEASED FEBRUARY 2011***

**PREPARED IN CONJUNCTION WITH  
THE DEPARTMENT OF JUVENILE JUSTICE AND DELINQUENCY PREVENTION**

<b>Fiscal Year</b>	<b>Current Projection as of June 30</b>
<b>2011</b>	404
<b>2012</b>	396
<b>2013</b>	405
<b>2014</b>	411
<b>2015</b>	413

SOURCE: NC Sentencing and Policy Advisory Commission,  
FY 2009/10 Disposition Simulation Data

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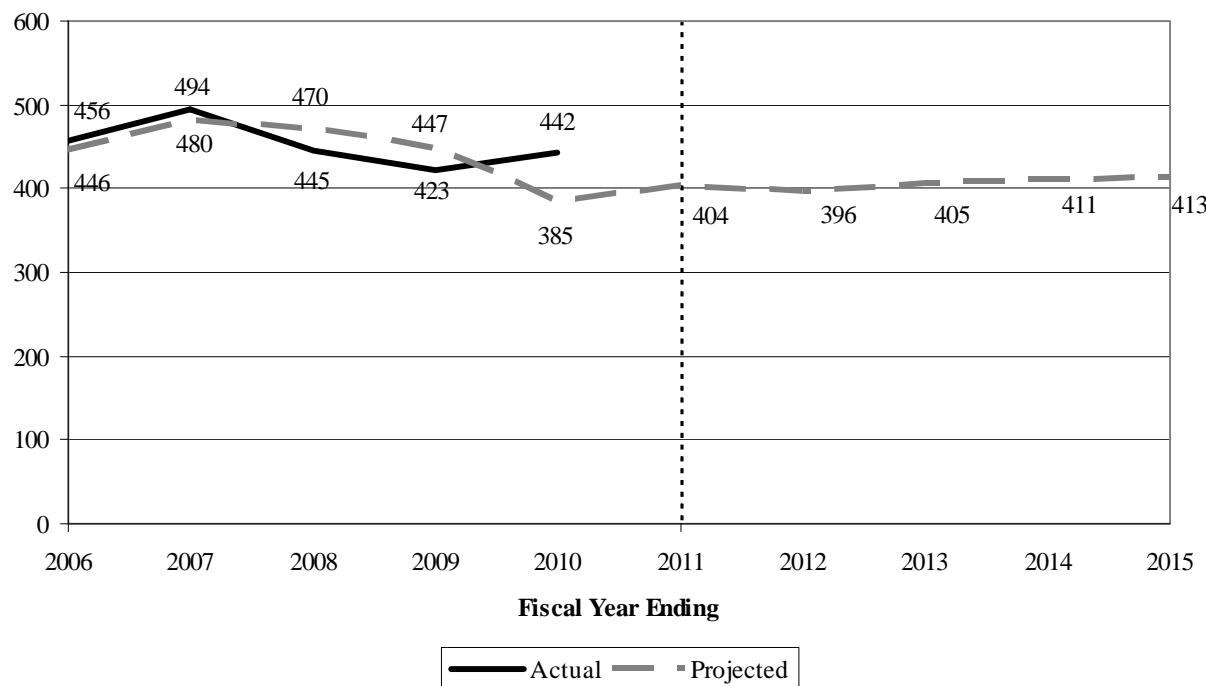
<sup>5</sup> YDC population figures (projected and actual) include juveniles on-campus and off-campus (e.g., home visit, community commitment, hospitalization, escape).

<sup>6</sup> Table 7 does not present available capacity for Level 3 dispositional resources.

## **Accuracy of the Level 3 Resource Projections**

Figure 2 provides a comparison of the previous Level 3 (YDC) resource projections with the actual YDC population. The figure also includes the current five-year projections. The chart shows a graphic representation of the historical accuracy of the first year of the juvenile resource projections produced for the past five years. The difference between the projected Level 3 (or YDC) population and the actual YDC population ranged between 10 to 57 beds (or between 2% and 15%) for the past five years. Again, it is important to note that the system is largely policy-driven and any change in policy and/or practice with regard to the use of dispositional resources greatly influences the accuracy of the resource projections.

**FIGURE 2  
ACTUAL AND PROJECTED  
LEVEL 3 (YOUTH DEVELOPMENT CENTER) POPULATION**



NOTE: The actual YDC population is based on the number of adjudicated delinquent juveniles located in a YDC (which includes Level 3 community-based commitments) on June 30<sup>th</sup> of each fiscal year provided.

SOURCE: NC Sentencing and Policy Advisory Commission, Disposition Simulation Data and  
NC Department of Juvenile Justice and Delinquency Prevention