

NORTH CAROLINA SENTENCING AND POLICY ADVISORY COMMISSION

**JUVENILE DELINQUENT POPULATION PROJECTIONS
FISCAL YEAR 2009/10 to FISCAL YEAR 2013/14**

RELEASED: MARCH 2010

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 (DJJDP). 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 7,369 FY 2008/09 juvenile delinquent dispositions (the new population) extracted from the North Carolina Juvenile Online Information Network (NC-JOIN), DJJDP’s management information system. The second part of the analysis includes juveniles who resided in a Youth Development Center (YDC) on July 1, 2009 – the beginning of the projection period. This is called the “stock” population. The projections take into account the decline of the resident “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 LEVELS		
	LOW 0-1 points	MEDIUM 2-3 points	HIGH 4 or more points
VIOLENT Class A-E felonies	Level 2 or 3	Level 3	Level 3
SERIOUS Class F-I felonies Class A1 misdemeanors	Level 1 or 2	Level 2	Level 2 or 3
MINOR Class 1, 2, 3 misdemeanors	Level 1	Level 1 or 2	Level 2

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 can also 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 2008/09):

- The projections assume a one percent annual growth in the rate of delinquent adjudications over the five-year period. This estimate is based on 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 1.7% over the next five years.¹ Although the youth population has been growing and is projected to continue to grow, recent data show declining trends in juvenile crime.²
- The five-year projections assume no change in judicial or prosecutorial behavior.

¹ Source: www.demog.state.nc.us.

² 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 30 in FY 2008/09. (Source: DJJDP.) In addition, the State Bureau of Investigation reports that from 2004 to 2008, there was a 20% drop in overall arrests for index crimes committed by juveniles under the age of 16. (Source: *Crime in North Carolina-2008 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.) Criminal complaints (Class A-I felonies and Class A1-3 misdemeanors) decreased 6.1% from CY 2007 to CY 2008. (Source: DJJDP.)

- 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 2008/09 (61.8%, 35.0%, and 3.2%, respectively).
- YDC length of stay is assumed to match the average length of stay by offense classification for juveniles released during FY 2008/09. The average length of stay was 15 months for juveniles adjudicated delinquent for a violent offense, 11 months for juveniles adjudicated delinquent for a serious offense, and 6 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 9 months.
- Over the projection period, the proportion of admissions to YDCs resulting from technical violations of probation will match the proportion found during FY 2008/09 (31.9%).
- 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 such decisions.

FY 2008/09 JUVENILE DELINQUENT DISPOSTIONS

Table 2 shows the distribution of the 7,369 delinquent cases 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 2008/09, 3.0% were adjudicated for a violent offense, 27.8% were adjudicated for a serious offense, and 69.2% were adjudicated for a minor offense. Seventy-one percent of cases involved a juvenile with a low delinquency history level, 15.6% involved a juvenile with a medium delinquency history level, and 13.4% involved a juvenile with a high delinquency level. Slightly more than half of the cases (n=3,855) 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 2008/09 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 3.2% of the cases, ordered Level 2 (Intermediate) dispositions in 35.0% of the cases, and ordered the remaining 61.8% of the cases to Level 1 (Community) dispositions. Over half of the cases (n=3,952) involved a juvenile adjudicated for a minor offense who received a community level disposition.

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. These data form the basis of the five-year resource projections. As indicated by the vertical "Total" column, the imposition of a Level 3 YDC commitment increased as the seriousness of the offense classification increased. Similarly, the imposition of a Level 3 YDC commitment increased as the delinquency history level increased. The largest group of juveniles (n=3,752) was those who had a low delinquency history level, were adjudicated of a minor offense, and received a Level 1 community disposition.

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

OFFENSE CLASSIFICATION	DELINQUENCY HISTORY LEVEL			TOTAL
	Low 0 – 1 point	Medium 2 – 3 points	High 4+ points	
Violent	130 (59.1%)	28 (12.7%)	62 (28.2%)	220 (3.0%)
Serious	1,250 (61.1%)	368 (18.0%)	428 (20.9%)	2,046 (27.8%)
Minor	3,855 (75.5%)	755 (14.8%)	493 (9.7%)	5,103 (69.2%)
TOTAL	5,235 (71.0%)	1,151 (15.6%)	983 (13.4%)	7,369 (100.0%)

SOURCE: NC Sentencing and Policy Advisory Commission, FY 2008/09 Disposition Simulation Data

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

OFFENSE CLASSIFICATION	DISPOSITION LEVEL			TOTAL
	Level 1: Community	Level 2: Intermediate	Level 3: Commitment	
Violent	3 (1.4%)	138 (62.7%)	79 (35.9%)	220 (3.0%)
Serious	599 (29.3%)	1,310 (64.0%)	137 (6.7%)	2,046 (27.8%)
Minor	3,952 (77.4%)	1,133 (22.2%)	18 (0.4%)	5,103 (69.2%)
TOTAL	4,554 (61.8%)	2,581 (35.0%)	234 (3.2%)	7,369 (100.0%)

SOURCE: NC Sentencing and Policy Advisory Commission, FY 2008/09 Disposition Simulation Data

There were 230 cases (3.1%) involving 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.

**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	
Violent (Class A - Class E)	<u>Level 2/Level 3</u> Level 1: 2 (1.5%) Level 2: 102 (78.5%) Level 3: 26 (20.0%) n = 130	<u>Level 3</u> Level 1: 1 (3.6%) Level 2: 14 (50.0%) Level 3: 13 (46.4%) n = 28	<u>Level 3</u> Level 1: 0 (0.0%) Level 2: 22 (35.5%) Level 3: 40 (64.5%) n = 62	Level 1: 3 (1.4%) Level 2: 138 (62.7%) Level 3: 79 (35.9%) n = 220 (3.0%)
Serious (Class F - Class A1)	<u>Level 1/Level 2</u> Level 1: 552 (44.2%) Level 2: 698 (55.8%) Level 3: 0 (0.0%) n = 1,250	<u>Level 2</u> Level 1: 45 (12.2%) Level 2: 319 (86.7%) Level 3: 4 (1.1%) n = 368	<u>Level 2/Level 3</u> Level 1: 2 (0.5%) Level 2: 293 (68.4%) Level 3: 133 (31.1%) n = 428	Level 1: 599 (29.3%) Level 2: 1,310 (64.0%) Level 3: 139 (6.7%) n = 2,046 (27.8%)
Minor (Class 1 - Class 3)	<u>Level 1</u> Level 1: 3,752 (97.3%) Level 2: 103 (2.7%) Level 3: 0 (0.0%) n = 3,855	<u>Level 1/Level 2</u> Level 1: 181 (24.0%) Level 2: 573 (75.9%) Level 3: 1 (0.1%) n = 755	<u>Level 2</u> Level 1: 19 (3.9%) Level 2: 457 (92.7%) Level 3: 17 (3.4%) n = 493	Level 1: 3,952 (77.4%) Level 2: 1,133 (22.2%) Level 3: 18 (0.4%) n = 5,103 (69.2%)
TOTAL	Level 1: 4,306 (82.3%) Level 2: 903 (17.2%) Level 3: 26 (0.5%) n = 5,235 (71.0%)	Level 1: 227 (19.7%) Level 2: 906 (78.7%) Level 3: 18 (1.6%) n = 1,151 (15.6%)	Level 1: 21 (2.1%) Level 2: 772 (78.6%) Level 3: 190 (19.3%) n = 983 (13.3%)	Level 1: 4,554 (61.8%) Level 2: 2,581 (35.0%) Level 3: 234 (3.2%) n = 7,369 (100.0%)

SOURCE: NC Sentencing and Policy Advisory Commission, FY 2008/09 Disposition Simulation Data

NOTE: In FY 2008/09, there were 230 cases (or 3.1%) involving 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.

YDC RESIDENT POPULATION

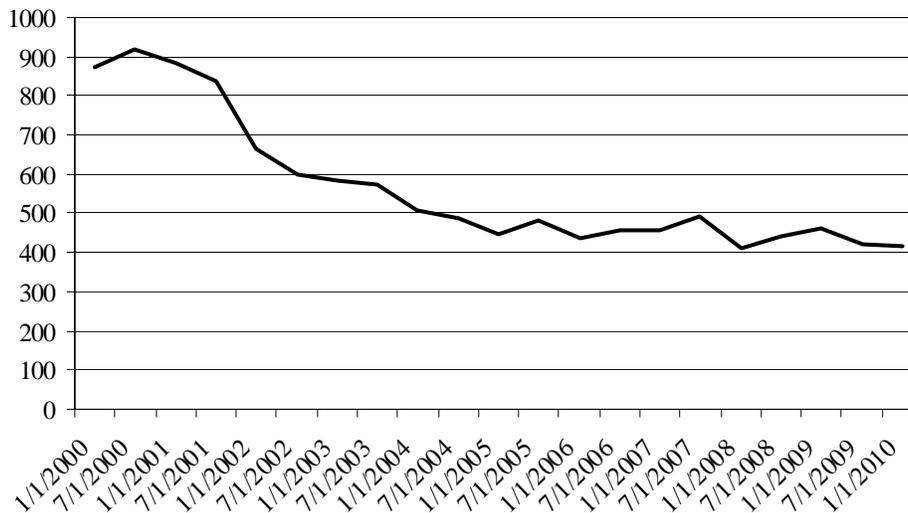
YDC Population on July 1, 2009

The resident population or “stock” is the number of juveniles residing in YDCs at the beginning of the projection period, which is July 1, 2009, 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, 2009, there were 422 juveniles residing in a YDC facility. Almost 74% of the juveniles had a high delinquency history level. The majority (89.1%) of the committed juveniles were adjudicated with a felony as their most serious offense. Of the juveniles residing in a YDC on July 1, 2009, 64.0% were adjudicated of a serious offense, 32.2% were adjudicated of a violent offense, and 3.8% were adjudicated of a minor offense.

Historical YDC Population Trends

As intended by the Juvenile Justice Reform Act of 1998, the YDC population has generally 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 – JANUARY 2010**



SOURCE: NC Department of Juvenile Justice and Delinquency Prevention

YDC ADMISSIONS, TERMINATIONS, 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 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 2001/02 to FY 2008/09, there has been a 31% 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 2008/09, they accounted for 5% of annual admissions. YDC admissions decreased almost 11% from FY 2007/08 to FY 2008/09 continuing the overall decreasing trend in the number of YDC admissions shown since FY 2001/02. In FY 2008/09, there was an average of 33 admissions per month.

YDC Terminations

From FY 2001/02 to FY 2008/09, terminations decreased by almost 49%. (See Table 5.) In general, terminations exceeded admissions for each of those years except for FY 2004/05 and FY 2006/07. From FY 2007/08 to FY 2008/09, there was a 15% decrease in the number of YDC terminations. In FY 2008/09, the average number of terminations per month was 35.

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

Fiscal Year	YDC ADMISSIONS			YDC TERMINATIONS		
	Total Number	Percent Change	Average Number Per Month	Total Number	Percent Change	Average Number Per Month
FY 2001/02	583	--	49	825	--	69
FY 2002/03	569	-2.4	47	577	-30.1	48
FY 2003/04	469	-17.6	39	548	-5.0	46
FY 2004/05	473	0.9	39	470	-14.2	39
FY 2005/06	448	-5.3	37	479	1.9	40
FY 2006/07	470	4.9	39	420	-12.3	35
FY 2007/08	450	-4.3	38	499	18.8	42
FY 2008/09	401	-10.9	33	422	-15.4	35

SOURCE: NC Department of Juvenile Justice and Delinquency Prevention

It is important to note that the number of admissions and terminations is extremely sensitive to changes in policies and practices. Looking at the average number of YDC admissions and terminations per month over the past five years, admissions appear to experience

less fluctuations than terminations. 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. (See Table 6.) For juveniles adjudicated delinquent for a serious offense, who represented 68% of YDC admissions in FY 2008/09, the average length of stay was 11.2 months. This average is similar to that of the previous two fiscal years (11.9 months and 11.5 months, respectively). After steadily declining from 21.4 months in FY 2004/05 to 14.2 months in FY 2007/08, the average length of stay for juveniles adjudicated delinquent for a violent offense has shown a slight increase to 14.9 months in FY 2008/09, an almost 5% increase. For juveniles adjudicated delinquent of a minor offense, the average length of stay has decreased each year since FY 2005/06, with an average of 6.4 months in FY 2008/09.

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

Juveniles Adjudicated of a:	FY 2004/05	FY 2005/06	FY 2006/07	FY 2007/08	FY 2008/09	% Change	
						FY 2007/08 to FY 2008/09	FY 2004/05 to FY 2008/09
Violent Offense	21.4	17.6	17.2	14.2	14.9	4.9	-30.4
Serious Offense	10.2	11.8	11.5	11.9	11.2	-5.9	9.8
Minor Offense	8.3	11.2	8.9	8.0	6.4	-20.0	-22.9
Overall	12.9	13.2	12.5	12.2	11.7	-4.1	-9.3

SOURCE: NC Department of Juvenile Justice and Delinquency Prevention

PROJECTED JUVENILE DELINQUENT POPULATIONS

Table 7 shows the projected Level 3 resource needs over the five-year projection period.³ Level 3 resource needs are projected to increase slightly over the period, with a projected need for 385 YDC beds by June 2010 and 401 YDC beds by June 2014. The YDC population was 423 on July 1, 2009. On March 1, 2010, the YDC population was 413.⁴

TABLE 7
LEVEL 3 COMMITMENT RESOURCE PROJECTIONS:
JUVENILES ADJUDICATED DELINQUENT
UPDATED MARCH 2010

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

Fiscal Year	Current Projection as of June 30
2010	385
2011	381
2012	384
2013	392
2014	401

SOURCE: NC Sentencing and Policy Advisory Commission,
FY 2008/09 Disposition Simulation Data

This projection is constrained by the legislative policy guiding how the DJJDP develops and manages YDCs. Because the General Assembly appropriates the DJJDP's YDC budget, sets staffing caps and staff-to-student ratios, the number of beds and consequently the flow of youths in and out of those beds are constrained by legislative goals and policy. Thus, there will be limited variability in the data from the DJJDP that is placed into the projection model based on the limited variance in numbers of youths capable of being processed through the YDCs in any fiscal year.

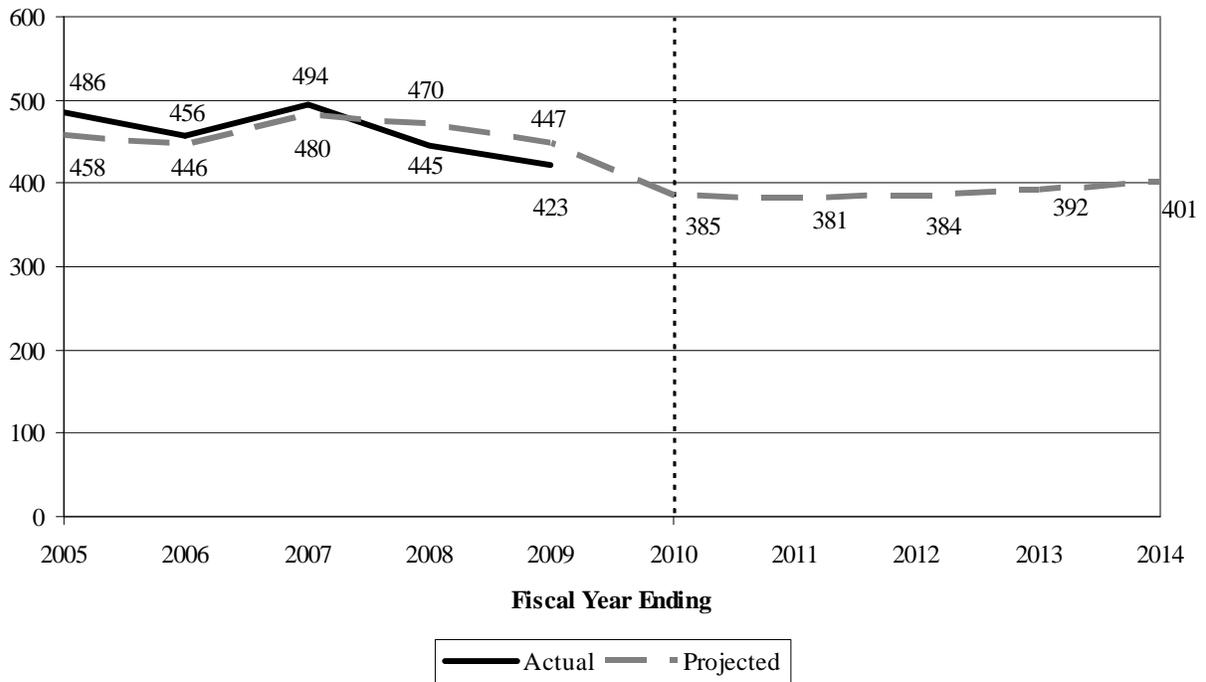
³ Table 7 does not present available capacity for Level 3 dispositional resources.

⁴ YDC population figures include juveniles on-campus and off-campus (*e.g.*, home visit, community commitment, hospitalization, escape).

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 28 beds (or between 2% and 6%) 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 30th of each fiscal year provided.

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