CITY OF MERCER ISLAND
CITY COUNCIL MEETING AGENDA

Thursday
April 20, 2017
5:00-7:00 PM

Mayor Bruce Bassett
Deputy Mayor Debbie Bertlin
Councilmembers Dan Grausz, Jeff Sanderson,
Wendy Weiker, David Wisenteiner and Benson Wong

This meeting will be held in the City Hall Council Chambers at 9611 SE 36th Street, Mercer Island, WA.

Contact: 206.275.7793 | council@mercergov.org | www.mercergov.org/council

SPECIAL JOINT MEETING WITH MISD BOARD

CALL TO ORDER & ROLL CALL

SPECIAL BUSINESS

Overview of Healthy Youth Survey Results - Fall 2016

Demographic Study - 2017 Update

2017 Legislative Updates to School Funding and McCleary Requirements

Interlocal Agreement - Sports Fields

School Bus Cameras Update

I-90 and Mobility Update

Possible Levies in 2018

ADJOURNMENT

Agenda Item Details

Meeting Apr 20, 2017 - Board of Directors Regular Meeting

Category Joint Meeting and Linkage/Study Session with City of Mercer Island

Subject Study Session: Overview of Healthy Youth Survey Results - Fall 2016

Type Discussion

Each fall of even numbered years, students in grades 6th, 8th, 10th and 12th across Washington State participate in the Healthy Youth Survey (HYS). Survey questions come from several well-established instruments that have been used across the nation and in Washington. This report reviews the results of the fall 2016 survey and implications for the Mercer Island community. The survey was administered on October 12, 2016 at the High School and October 14, 2016 at the Middle School, with Homecoming occurring on September 24, 2016.

The Healthy Youth Survey poses questions that are related to students' increased risk of social and emotional injury; poor health outcomes; and cigarette, alcohol and illegal drug use. Results are used by schools, communities, and state and local health departments to plan programs to support our youth and reduce the risks to their adolescent development. The survey has been an important source of data for both Mercer Island School District and Mercer Island Youth and Family Services.

This District staff report for the Mercer Island School Board and City Council highlights the results from selected survey questions. The attached charts contain quantitative result comparisons from 2010, 2012, 2014 and 2016 survey administrations (broken down by grade level), as well as 2016 Washington State results. Consistent with previous analysis, the results offer areas for the community and schools to celebrate and opportunities for reflection and improvement.

Cigarette and Tobacco Use

- Increase in the percentage of students across all four grade level who report that the community believes smoking is "very wrong"
- Moderate positive change in the perceptions of students who report that cigarettes would be "very hard" to acquire
- E-cigarettes and vaping dropped by 10 percent amongst seniors but the same cohort of students (2014 sophomores and 2016 seniors) did not change at all (13 percent)
- While no trend data is available, E-cigarette and vaping use on campus is approximately 8% at the High School
- Only between a quarter and third of high school students surveyed believe that using e-cigarettes or vape pens poses a "great risk"

Alcohol Use

- Drinking amongst middle school students has remained historically low, but Mercer Island students report an increase in high school
- Students (sophomores in 2014 and seniors in 2016) who reported having at least a glass/can or alcohol in the past 30 days increased by 22 percent
- Compared to the state, lifetime alcohol use is less on Mercer Island
- Binge drinking at Mercer Island High School is down over the past six years
- Alcohol use on school property is not an issue at Islander Middle School but up since 2014 at MIHS
- Students perception of negative community views on youth alcohol use continues to decrease from 6 to 12 grade
- Mercer Island youth do not perceive alcohol as a great risk to students compared to their peers across the state in all grade levels

Marijuana and Illegal Drug Use

As reported on May 16, 2013 and April 20, 2015, Mercer Island School District and Mercer Island Youth and Family Services expressed concern over the passage of Initiative 502 that allowed for legalized marijuana use by adults over 21 in Washington State. The school district has been monitoring the impacts over the last several years.

- Reported marijuana use is down from 2014 to 2016 amongst 8, 10, and 12 graders; however, marijuana use continues to increase across the three grade levels
- The percentage of Mercer Island students who report having ever used marijuana continues to significantly trail other peers in the state
- Marijuana use on school property is something to monitor at the high school (edible forms of marijuana are an admitted challenge at MIHS)
- Mercer Island students perceive that the community is more opposed to youth marijuana use as other communities in the state
- Marijuana continues to be more accessible the older students get
- Mercer Island students believe that marijuana use poses a greater risk than their peers across the state
- Illegal drug use by the cohort of 10th grade students who took the survey in 2014 and again as 12th graders in 2016 more than doubled and illegal drug use amongst seniors at MIHS surpasses the state average
- Substance use at school by Mercer Island students is lower than the state average at all four grade levels surveyed

Mental, Social, Emotional Health and Well Being

- Students at Mercer Island schools feel more safe at school than others in the state
- While students in Mercer Island schools enjoy school as much or more than others in the state, the average still hovers only around 50 percent
- Despite explicit efforts, the percent of students who report they know how to handle disagreements, solve problems, consider effects of decisions and be

empathetic declined amongst 6, 8, and 10 graders and only increased by one percent in 12 grade

- Mercer Island youth report less bullying in the past 30 days and more confidence in the school of almost always or often trying to stop bullying compared to peers in the state and

School programs that support students and general school climate are important in supporting the health of our youth. There are a variety of school programs in the K-12 continuum, such as BRIDGES at MIHS, WEB at IMS, Second Step starting in the elementary grades, required health curriculum and access to counselors and caring adults at all schools, which support this goal.

These data also inform the prevention and clinical work of the school and community-based Mercer Island Youth and Family Services programs: mental health and drug and alcohol counselors, Healthy Youth Initiative, and Communities that Care.

Mercer Island School District Healthy Youth Survey

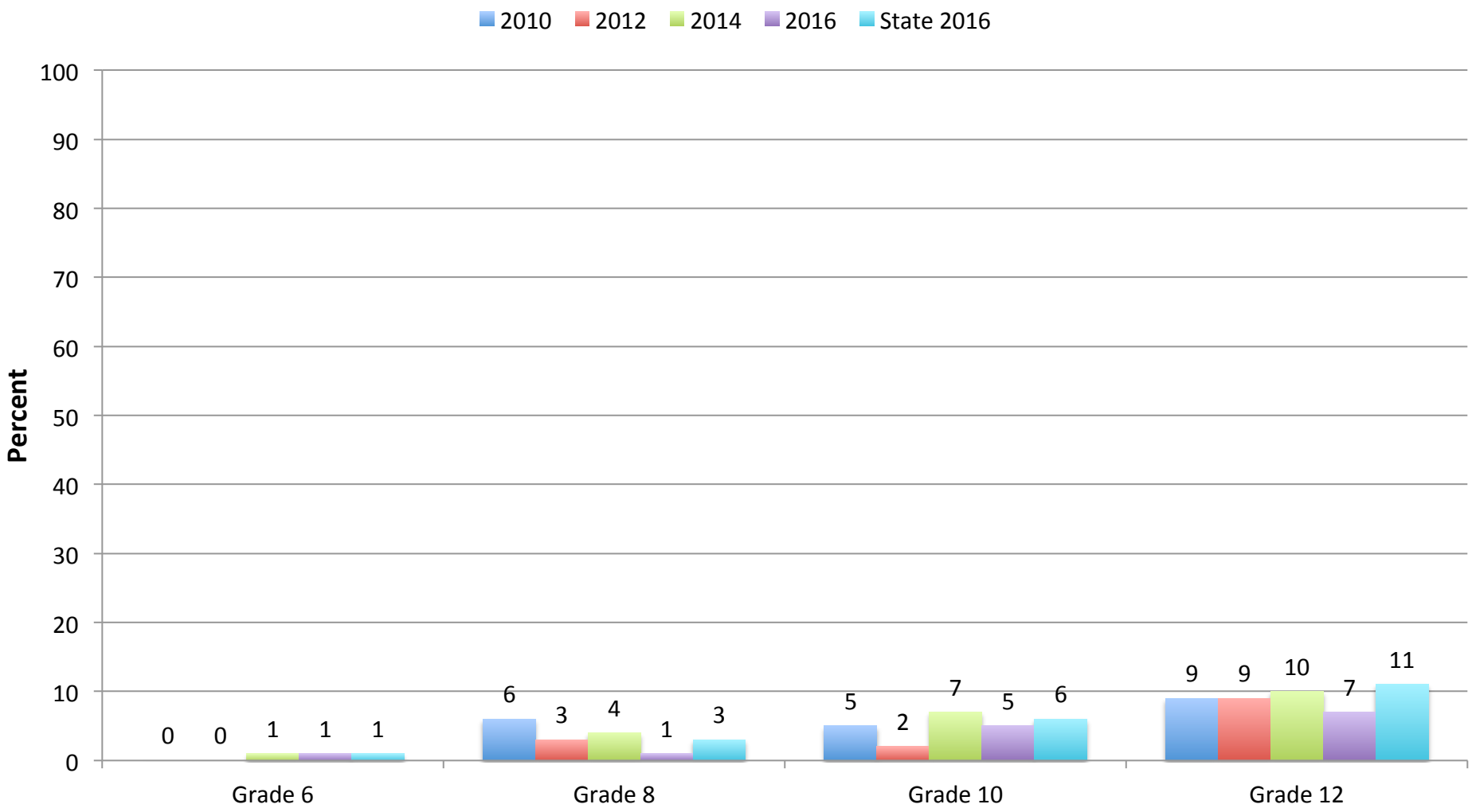
Highlights from the 2010, 2012, 2014 and 2016 Healthy Youth Surveys

Student Participation

- **Fall 2010**
  - 253 Grade 6 students
  - 267 Grade 8 students
  - 304 Grade 10 students
  - 261 Grade 12 students
- **Fall 2012**
  - 331 (91%) of Grade 6 students
  - 261 (82% of Grade 8 students
  - 224 (65%) of Grade 10 students
  - 227 (57%) of Grade 12 students
- **Fall 2014**
  - 308 (85%) of Grade 6 students
  - 311 (83%) of Grade 8 students
  - 262 (78%) of Grade 10 students
  - 216 (63%) of Grade 12 students
- **Fall 2016**
  - 329 (90%) of Grade 6 students
  - 266 (73%) of Grade 8 students
  - 301 (73%) of Grade 10 students
  - 168 (49%) of Grade 12 students

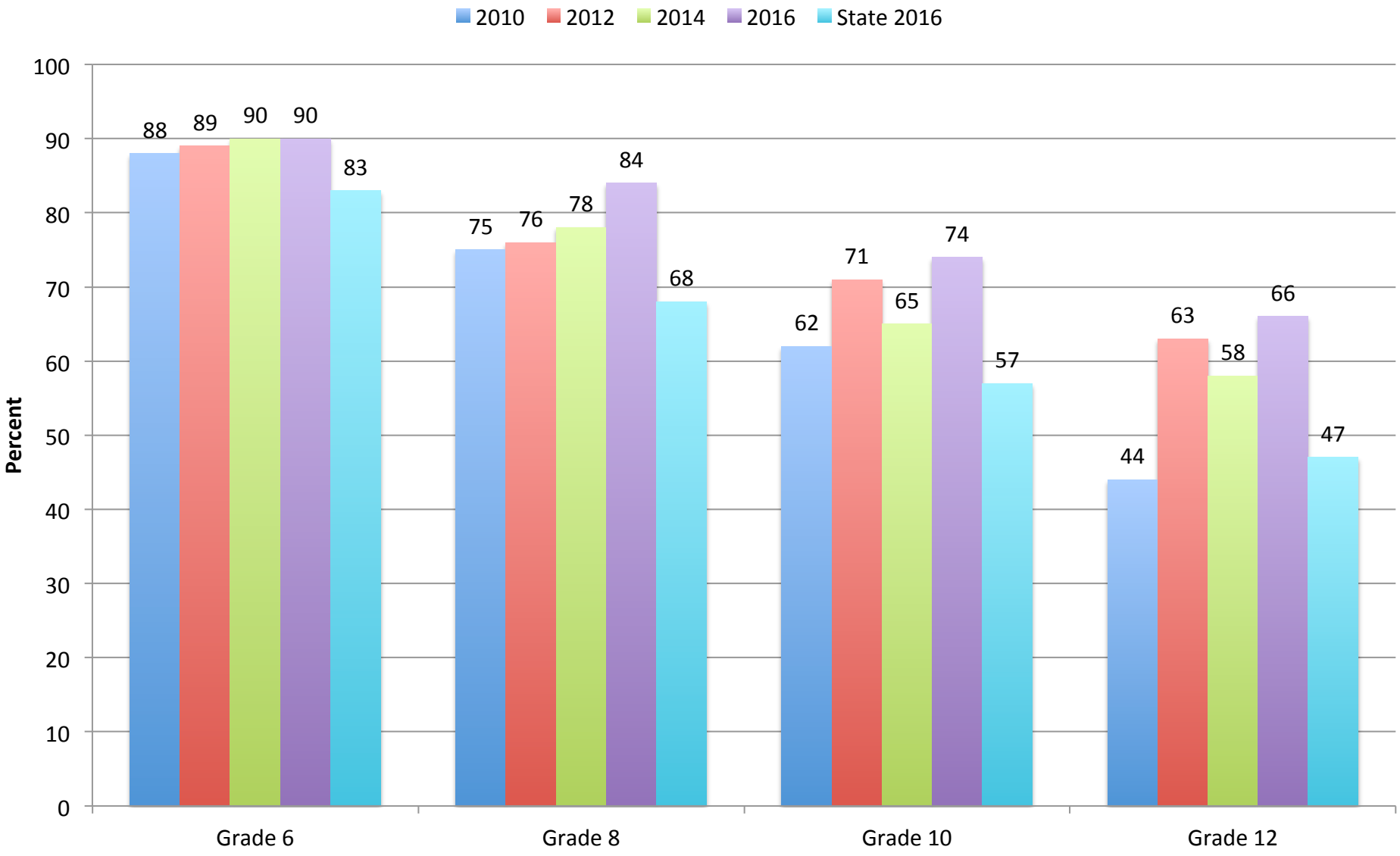
Current Cigarette Smoking

Percent of students who report smoking cigarettes in the past 30 days



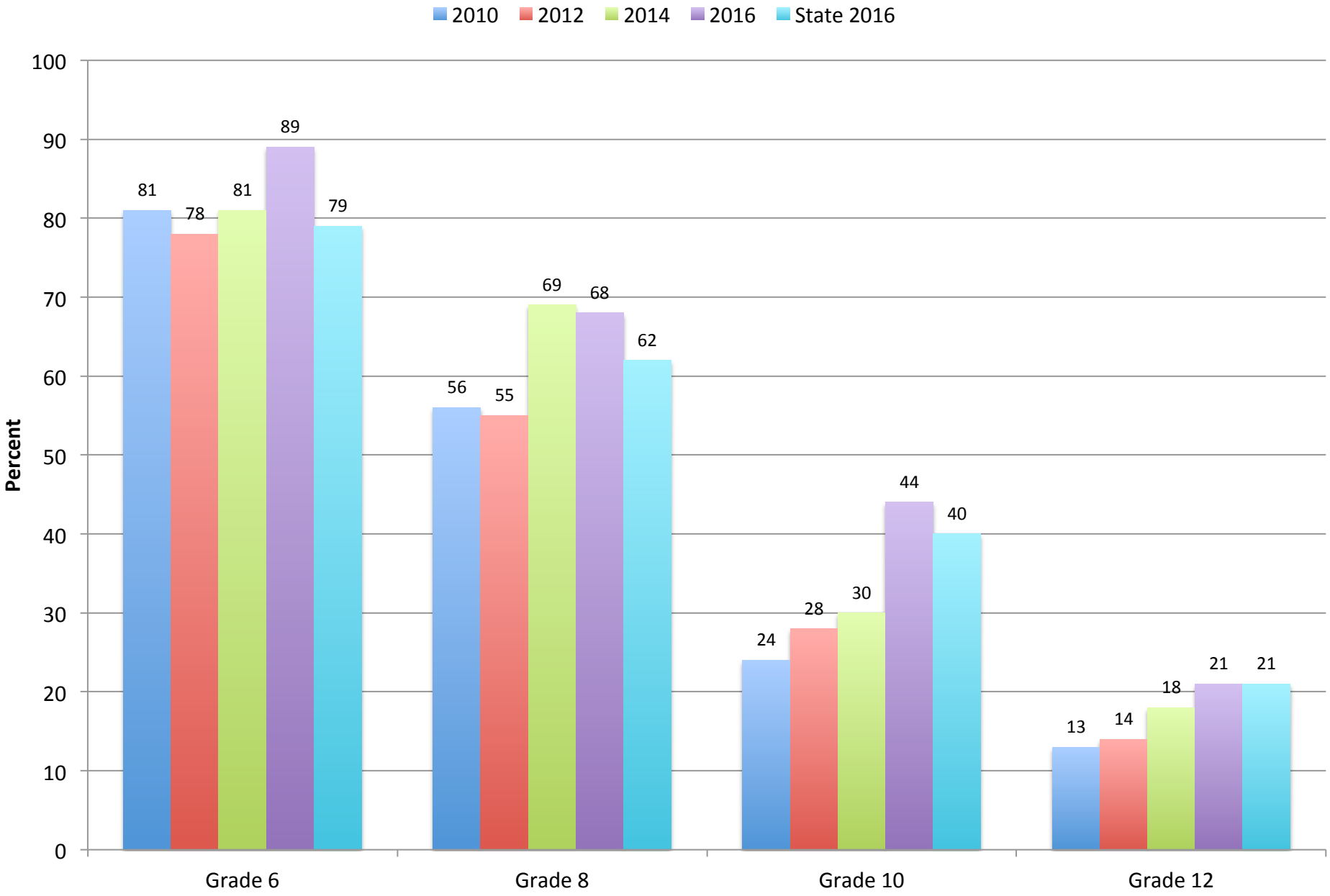
Perception of Neighborhood Norms - Smoking

Percent of students who report that adults in their neighborhood think youth smoking is "very wrong"



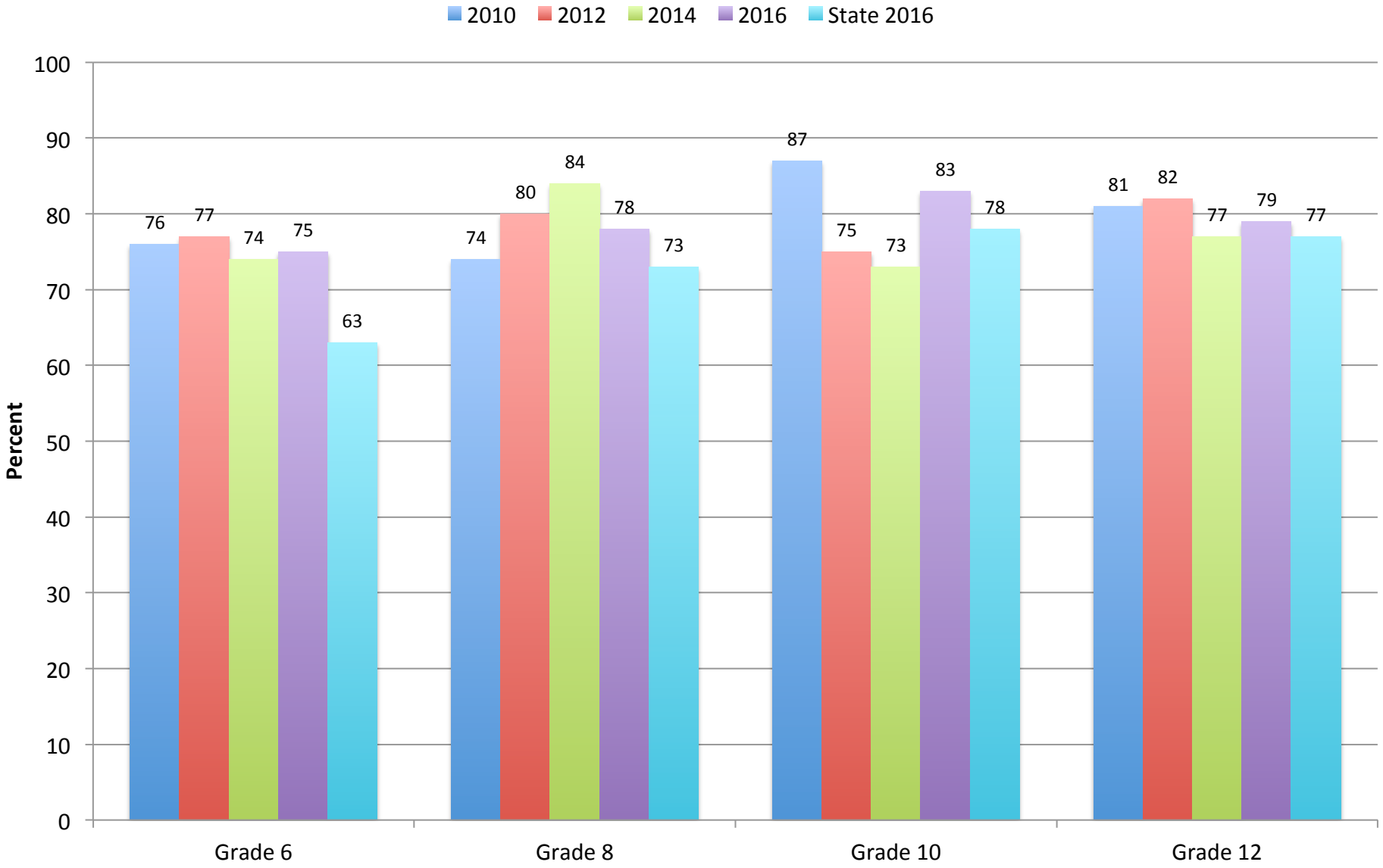
Perceived Availability of Cigarettes

Percent of students who report cigarettes would be "very hard" to get



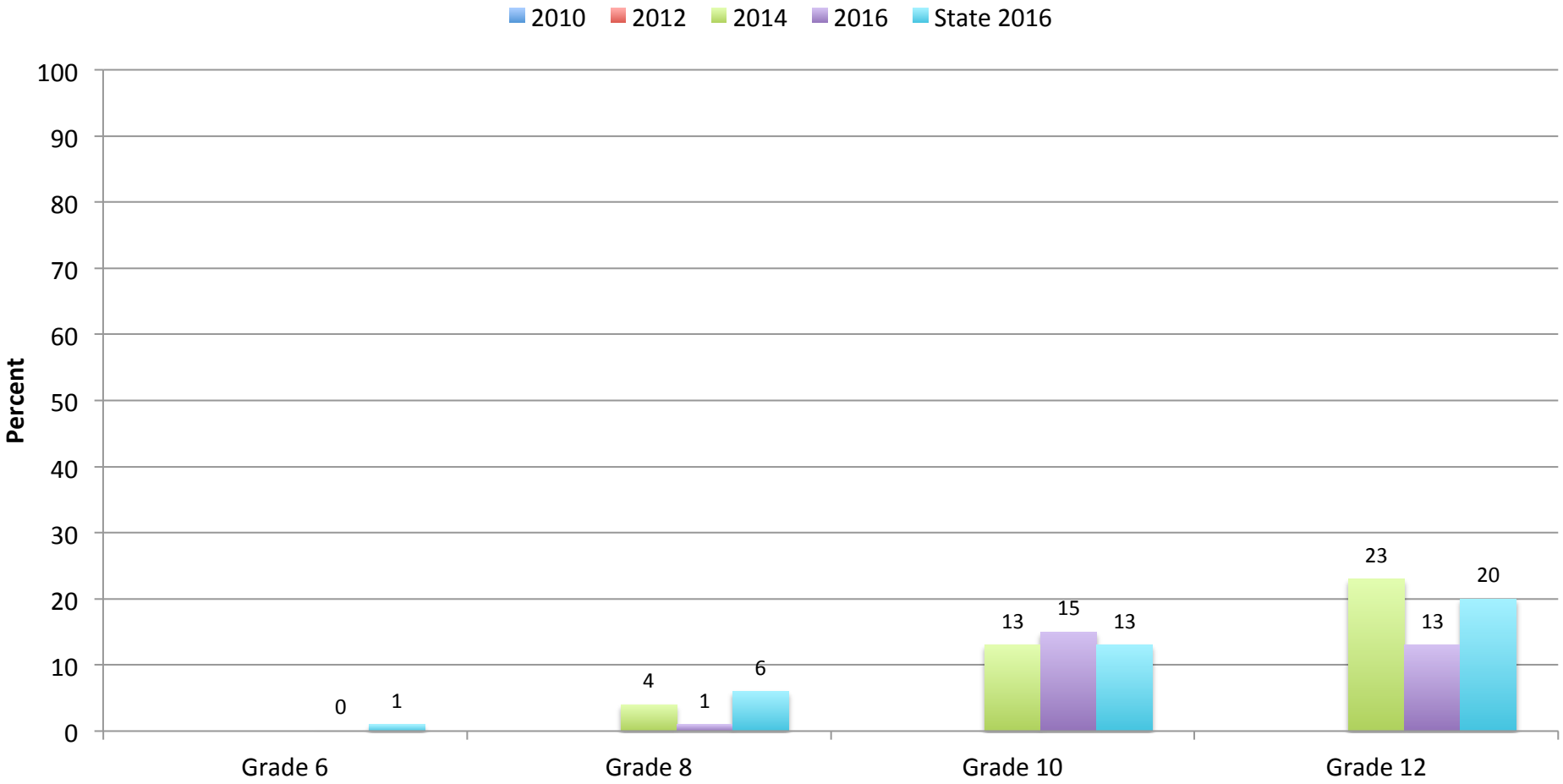
Perceived Risk of Regular Cigarette Smoking

Percent of students who report "great risk" of harm from smoking a pack or more a day



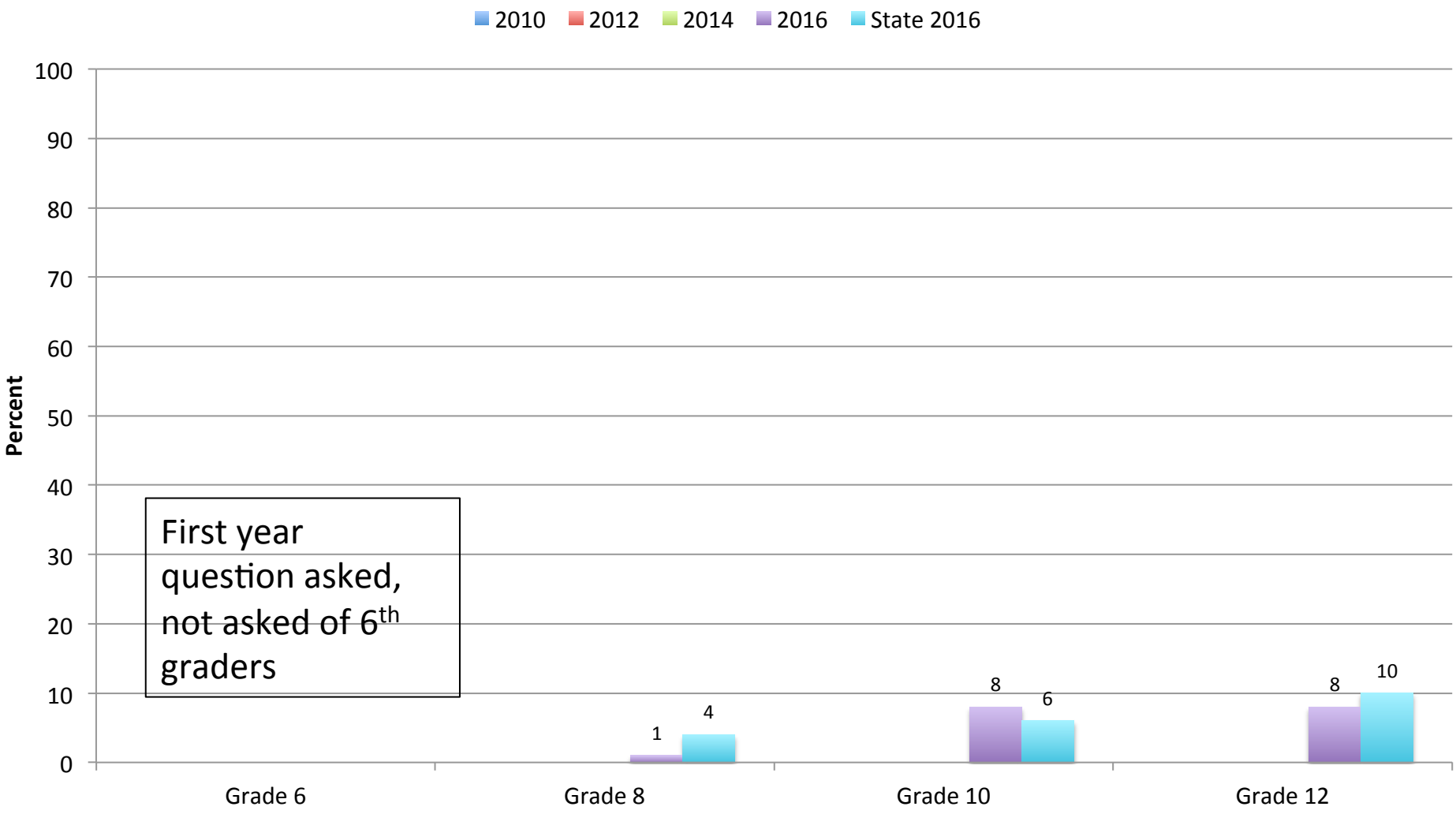
E-Cigarette Smoking or Vaping

Percent of students who report using an electronic cigarette, e-cig, or vape pens in the past 30 days



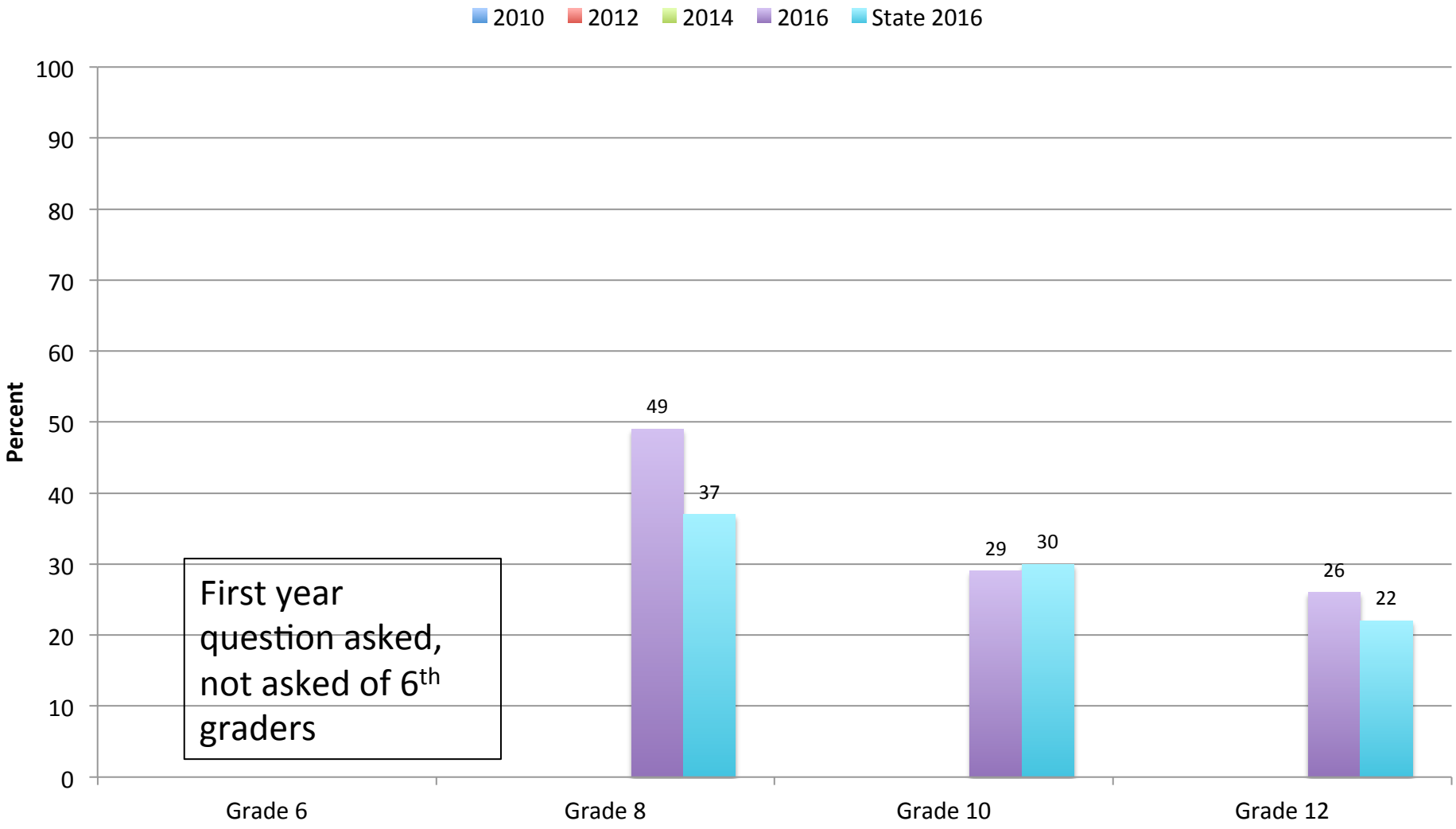
E-Cigarette Use on School Property

Percent of students who report using an electronic cigarette on school property in the past 30 days



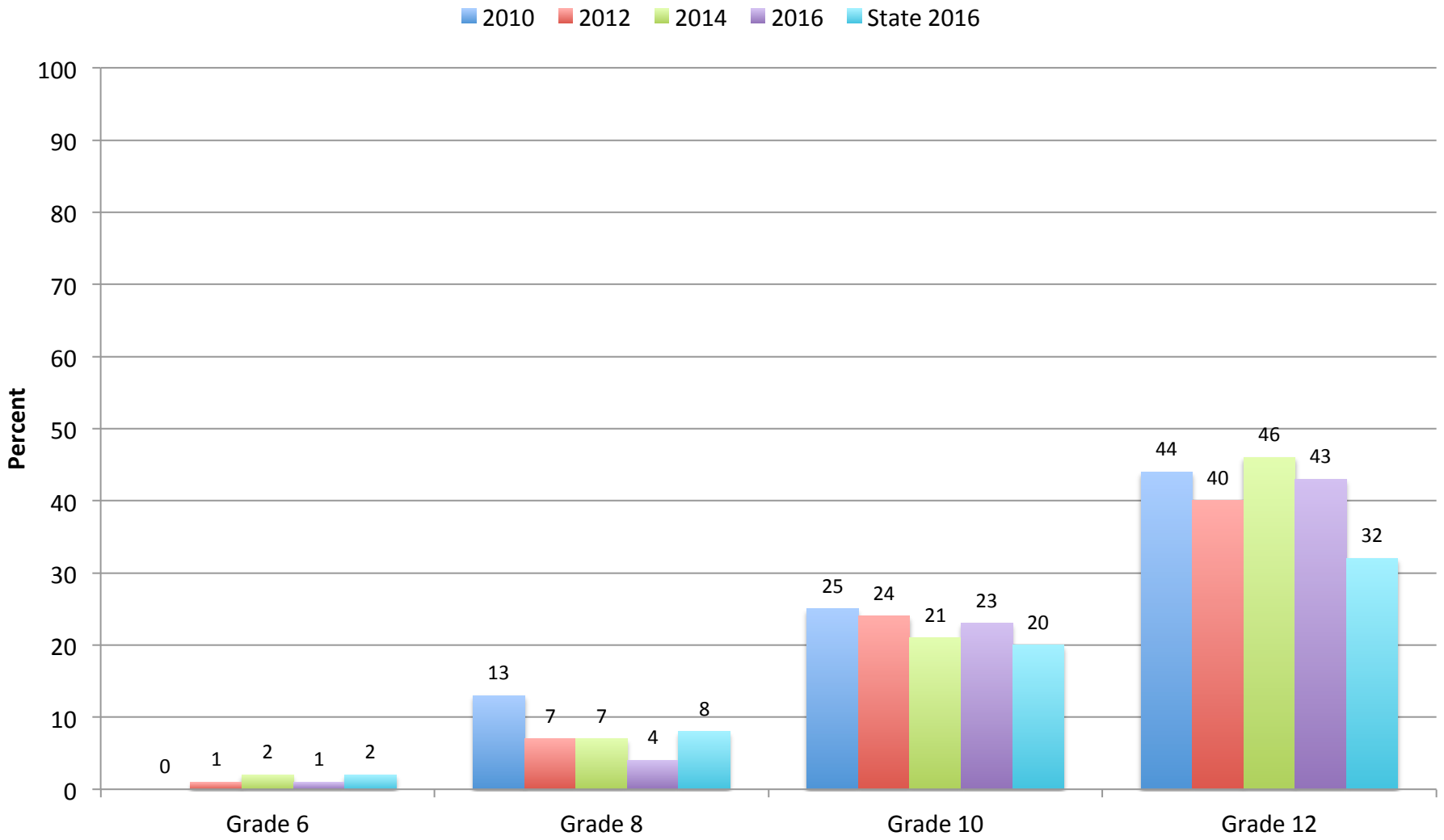
Perceived Risk of E-Cigarette Smoking or Vaping

Percent of students who report "great risk" of harm from using e-cigarette or vape pen regularly (almost daily)



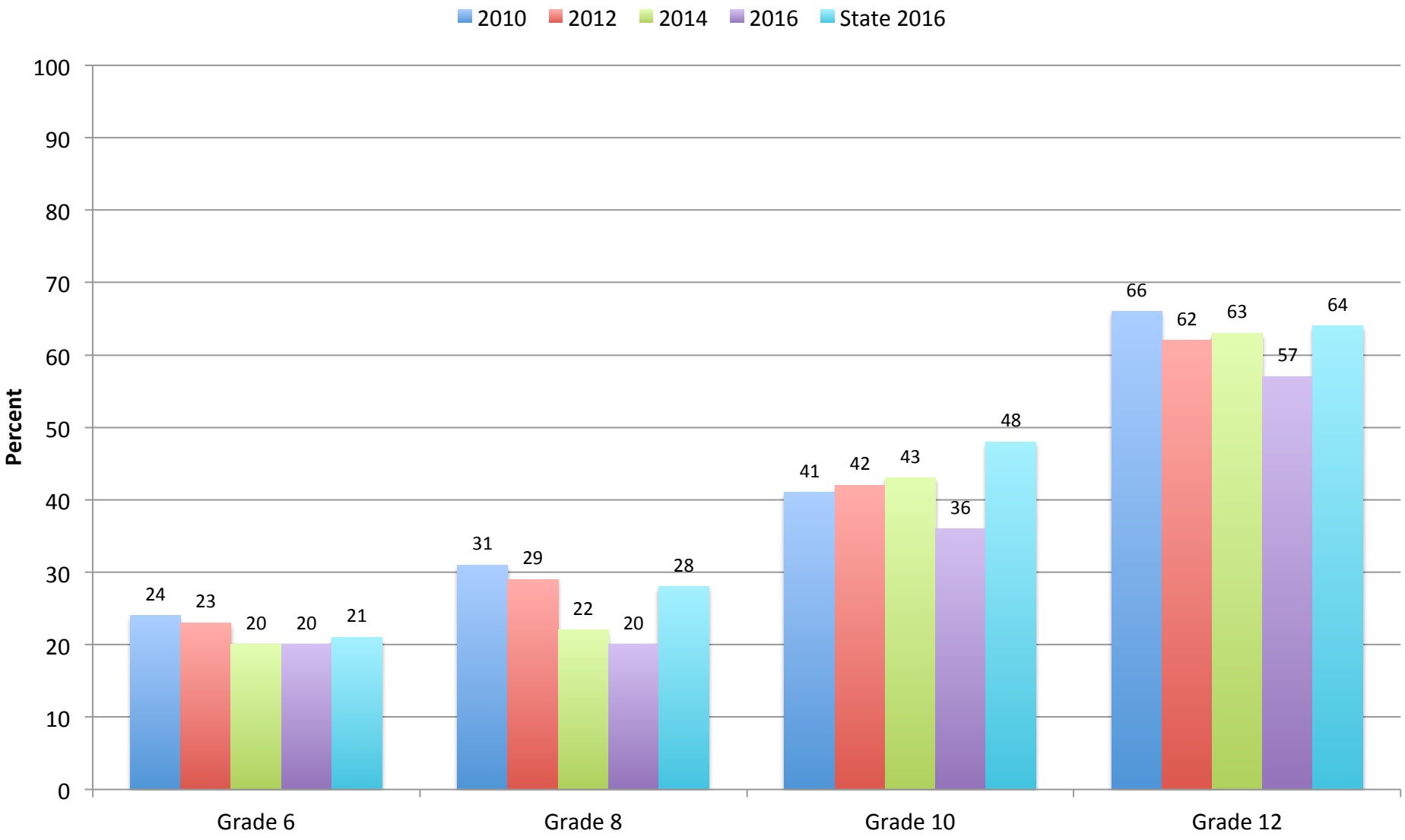
Current Alcohol Use

Percent of students who report having drunk a glass, can or bottle of alcohol in the past 30 days



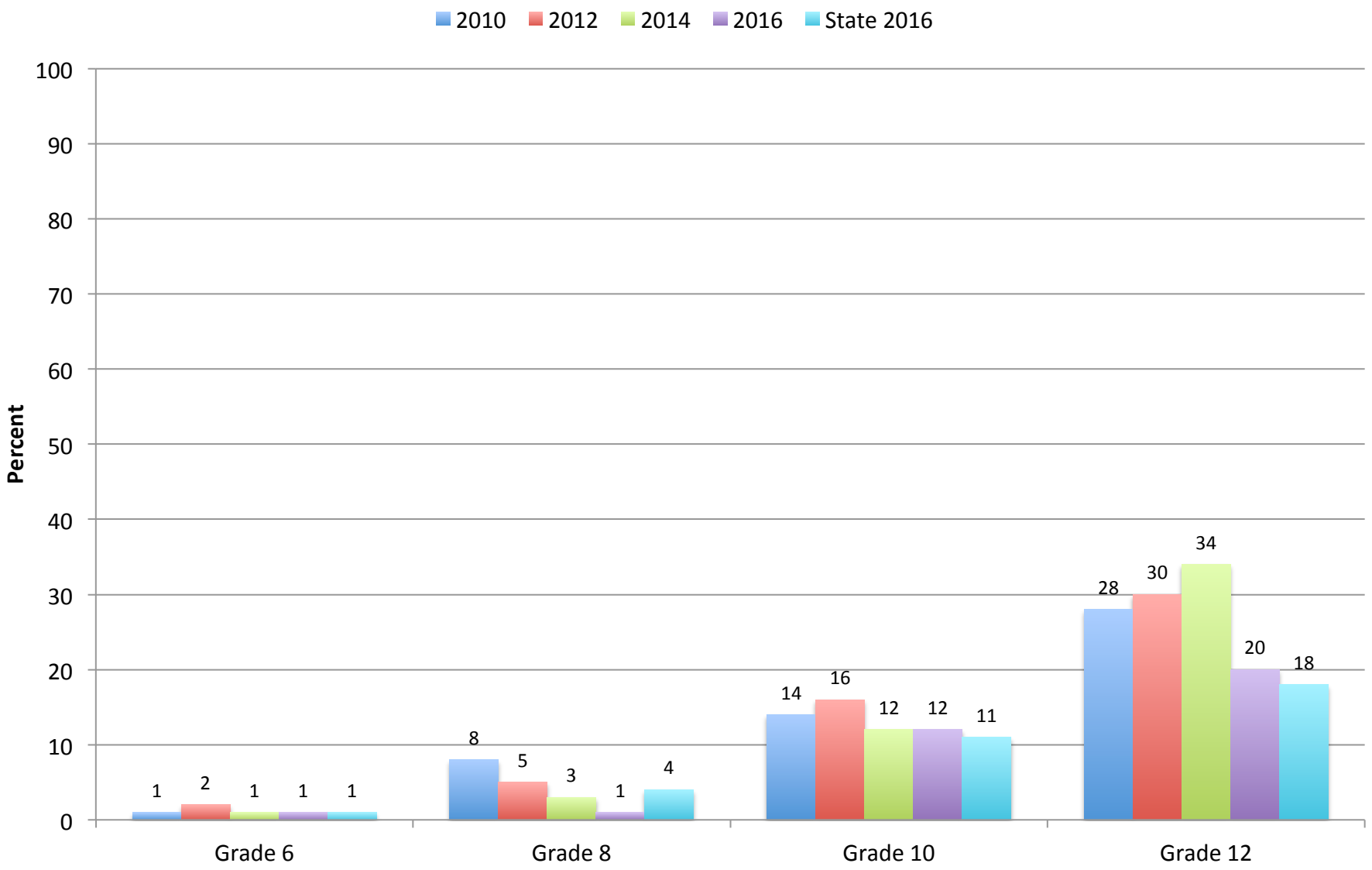
Lifetime Alcohol Use

Percent of students who report having ever drunk more than a sip of alcohol



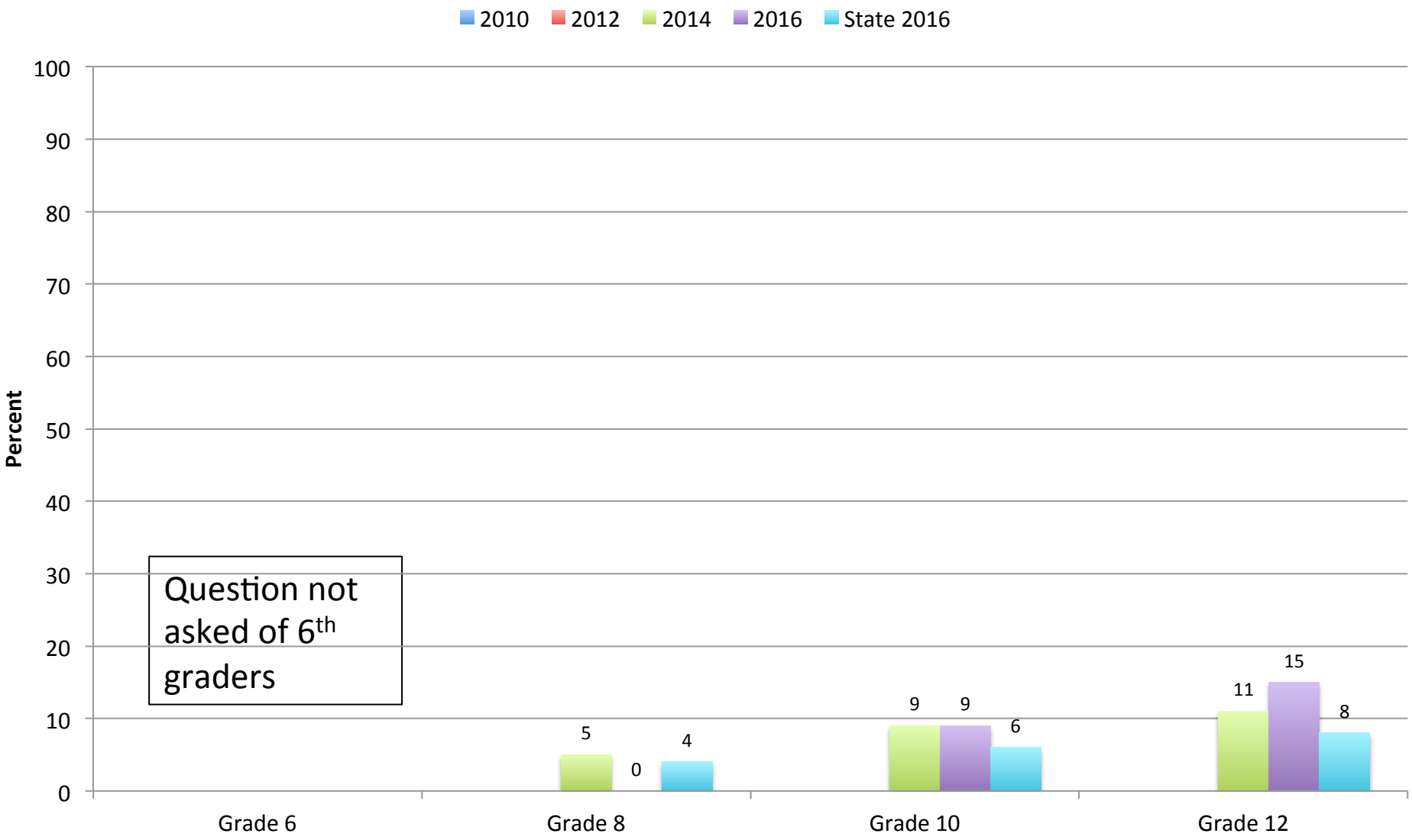
Current Binge Drinking

Percent of students reporting having drunk 5 or more drinks in a row in the past two weeks



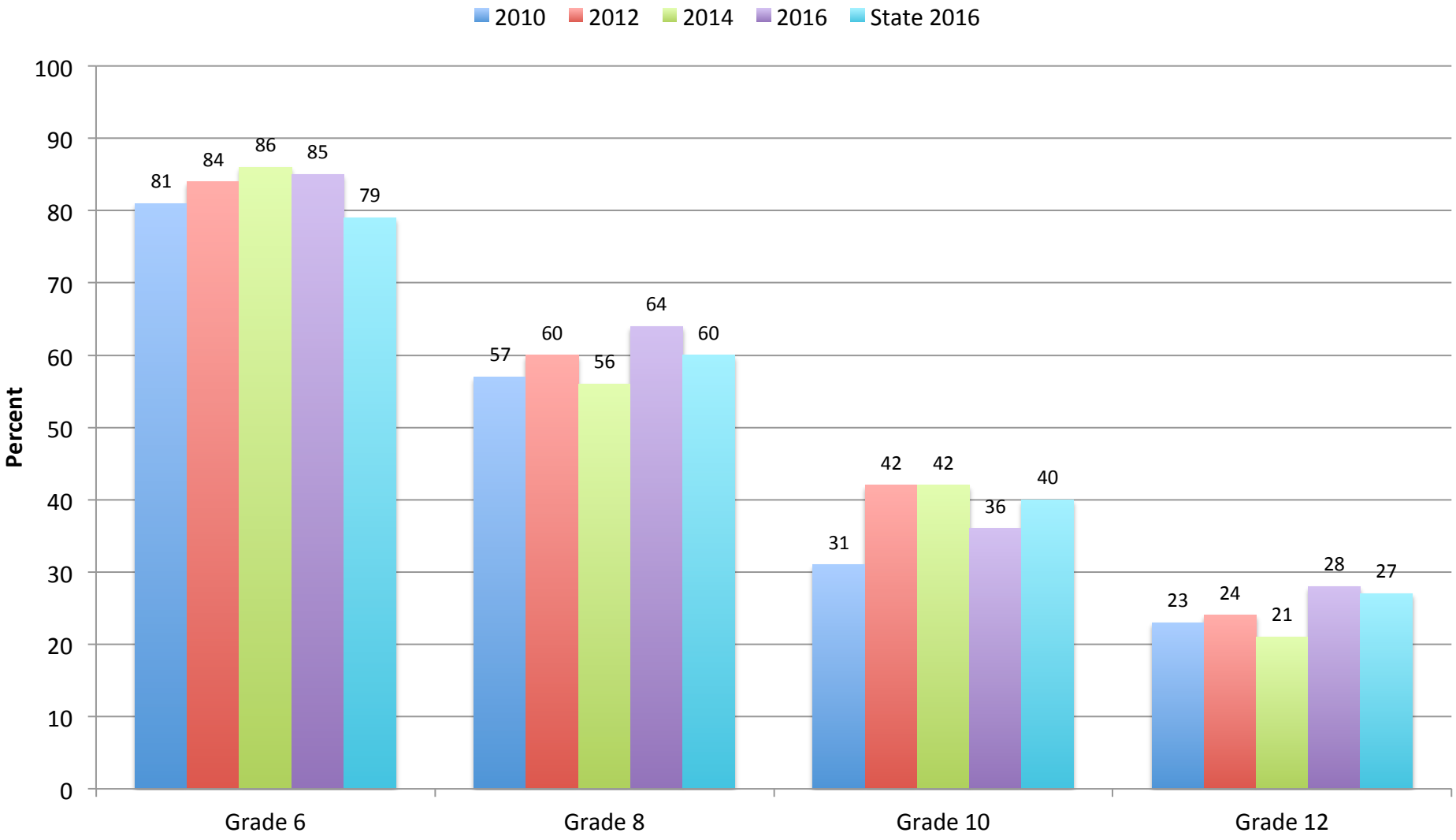
Alcohol Use on School Property

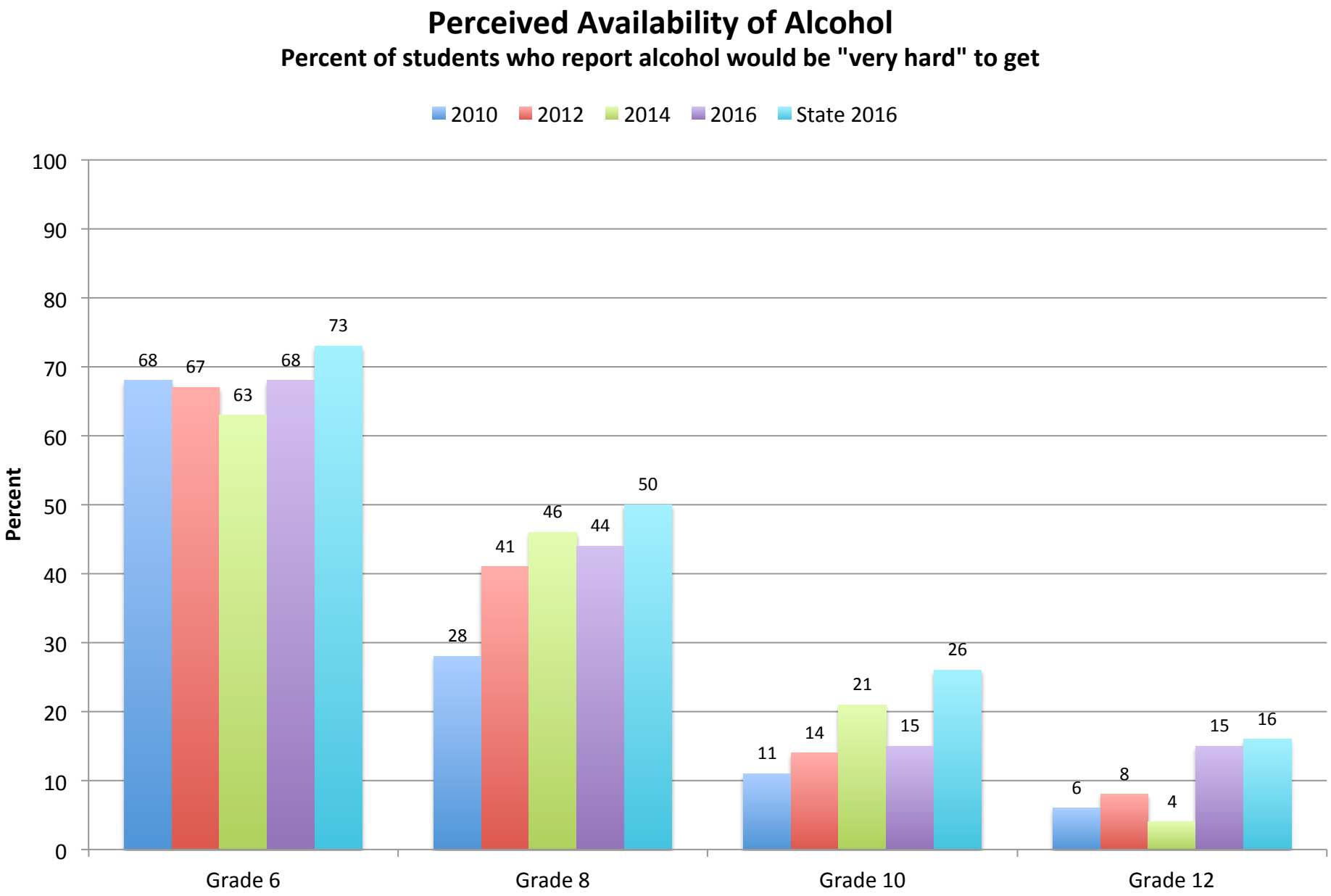
Percent of students who report having at least one drink of alcohol on school property in the past 30 days



Perception of Neighborhood Norms - Alcohol

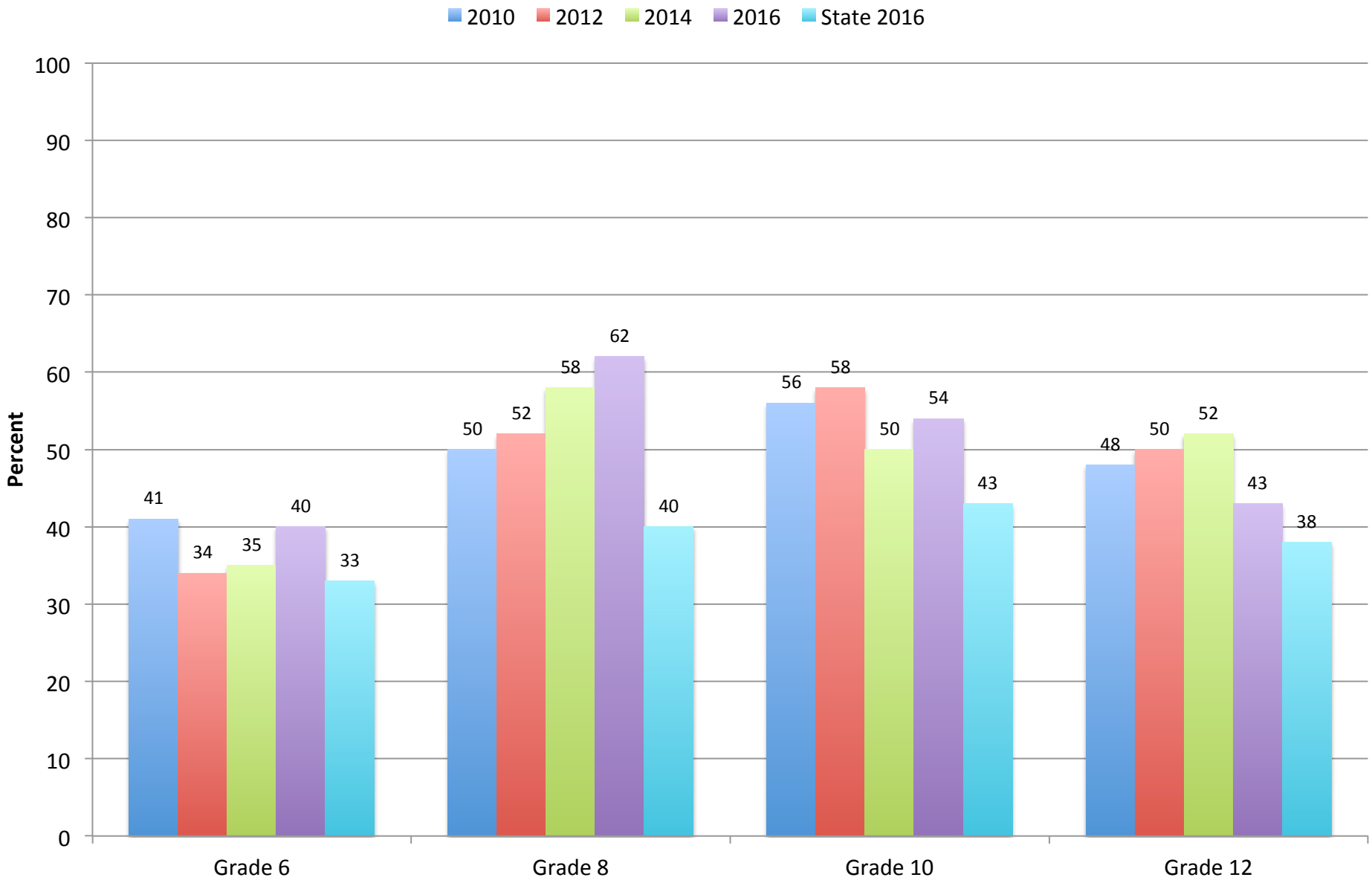
Percent of students who report that adults in their neighborhood think youth drinking is "very wrong"




Perceived Availability of Alcohol
Percent of students who report alcohol would be "very hard" to get
2010
2012
2014
2016
State 2016
Percent
100
90
80
70
60
50
40
30
20
10
0
68
67
63
68
73
28
41
46
44
50
11
14
21
15
26
6
8
4
15
16
Grade 6
Grade 8
Grade 10
Grade 12

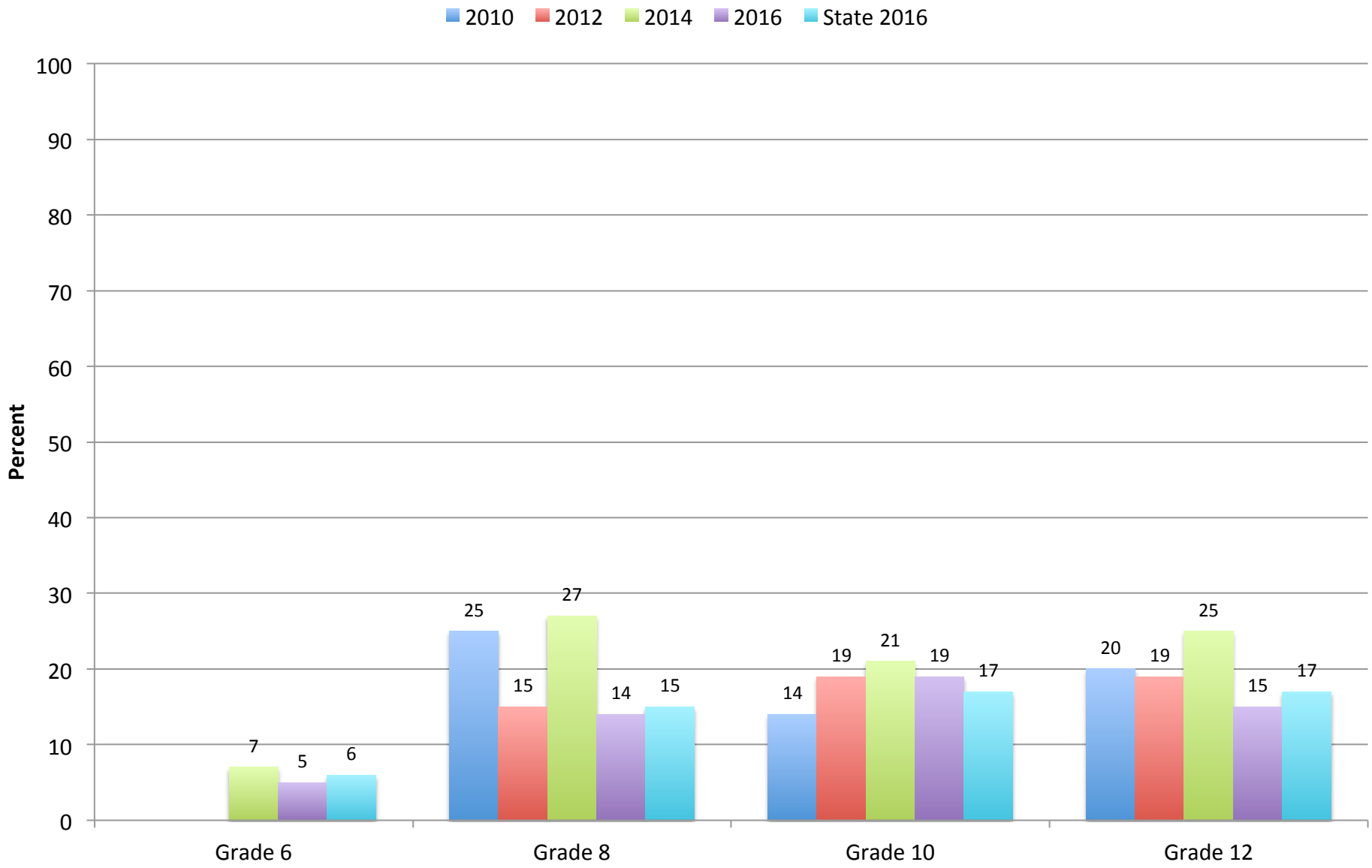
Perceived Risk of Regular Alcohol Use

Percent of students who report "great risk" of harm from drinking alcohol daily



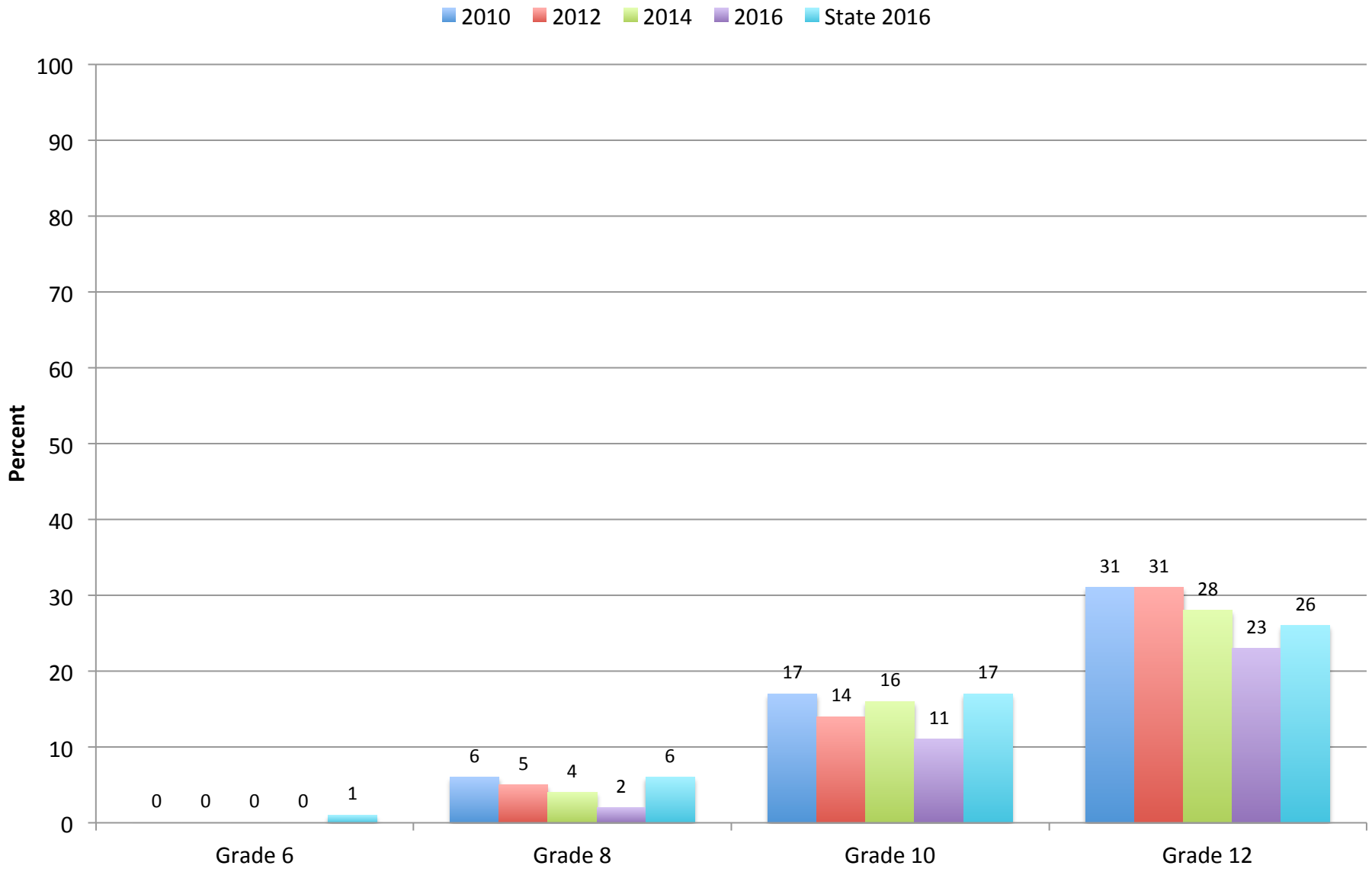
Riding with a Drinking Driver

Percent of students who report having ridden in the past 30 days with a driver who had been driving alcohol



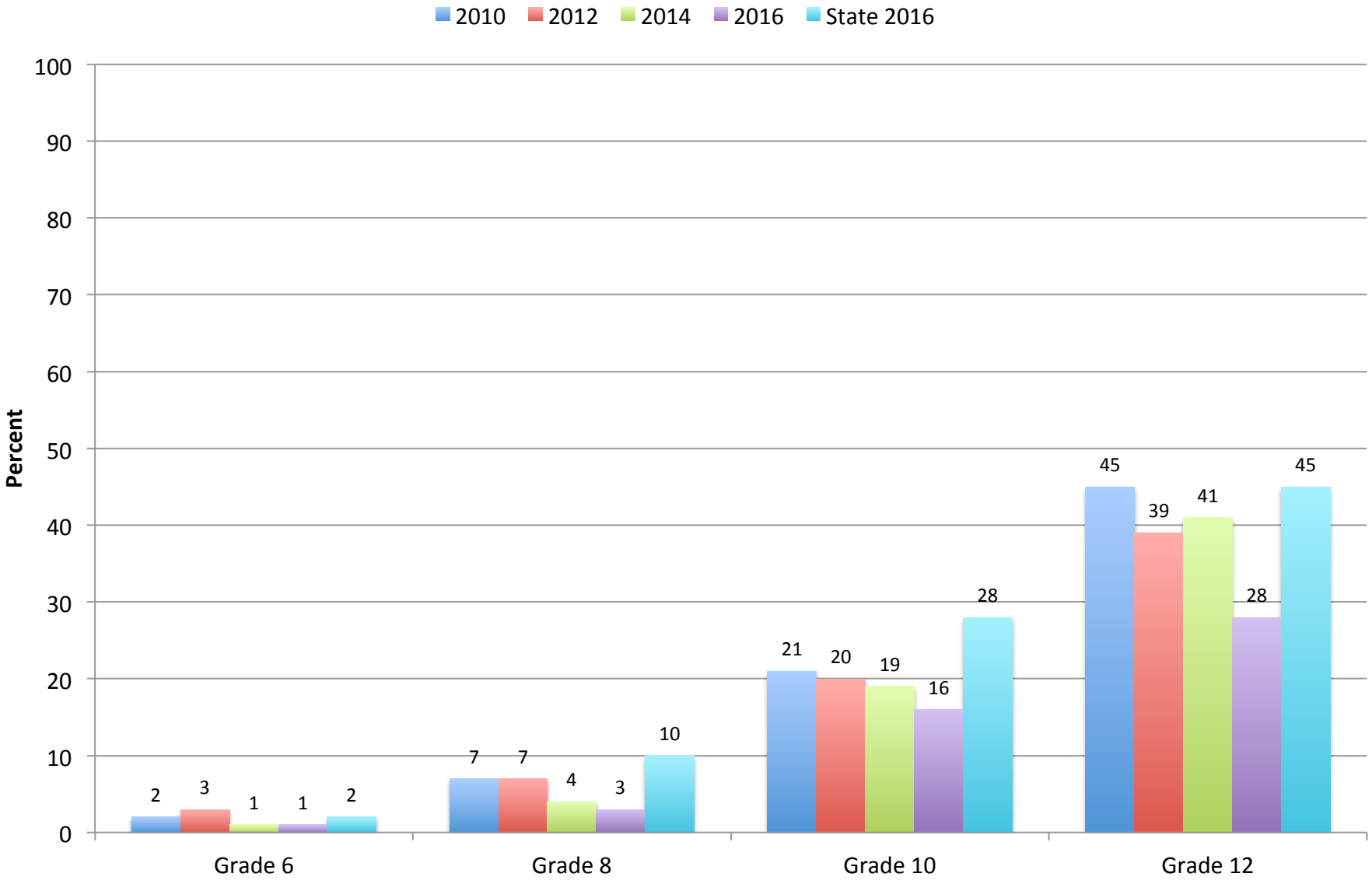
Current Marijuana Use

Percent of students who report using marijuana in the past 30 days



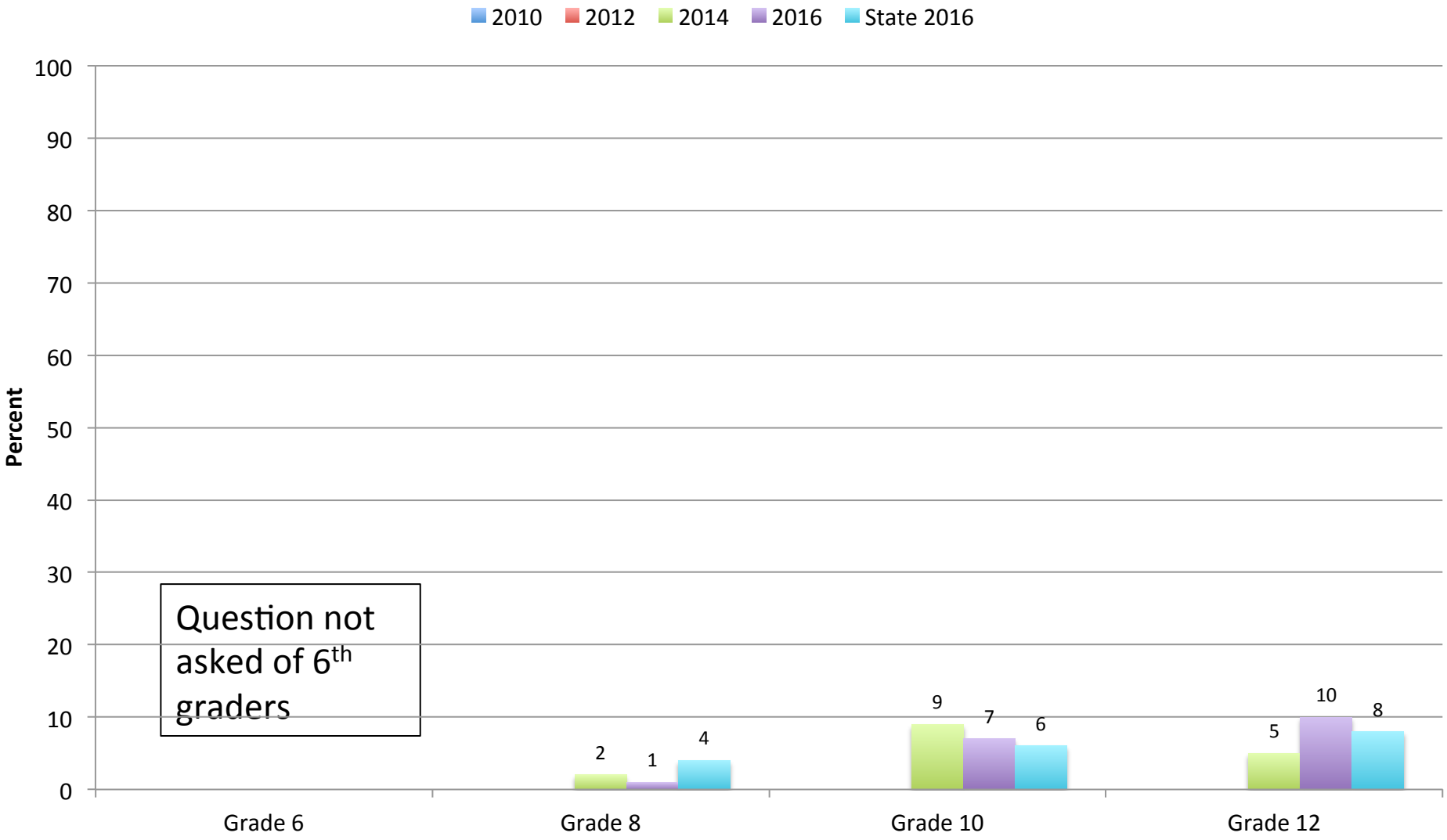
Lifetime Marijuana Use

Percent of students who report having ever used marijuana



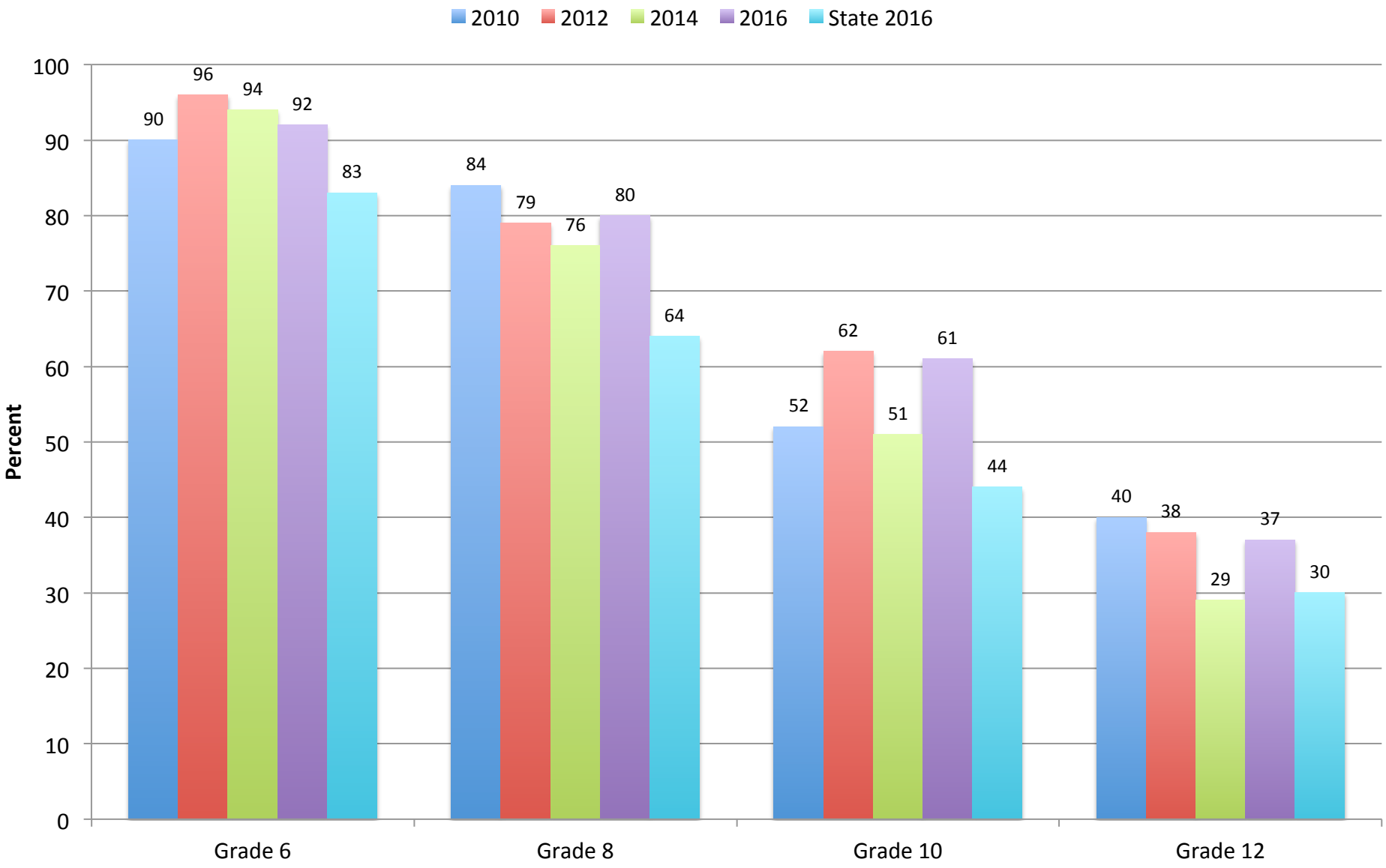
Marijuana Use on School Property

Percent of students who report using marijuana on school property in the past 30 days



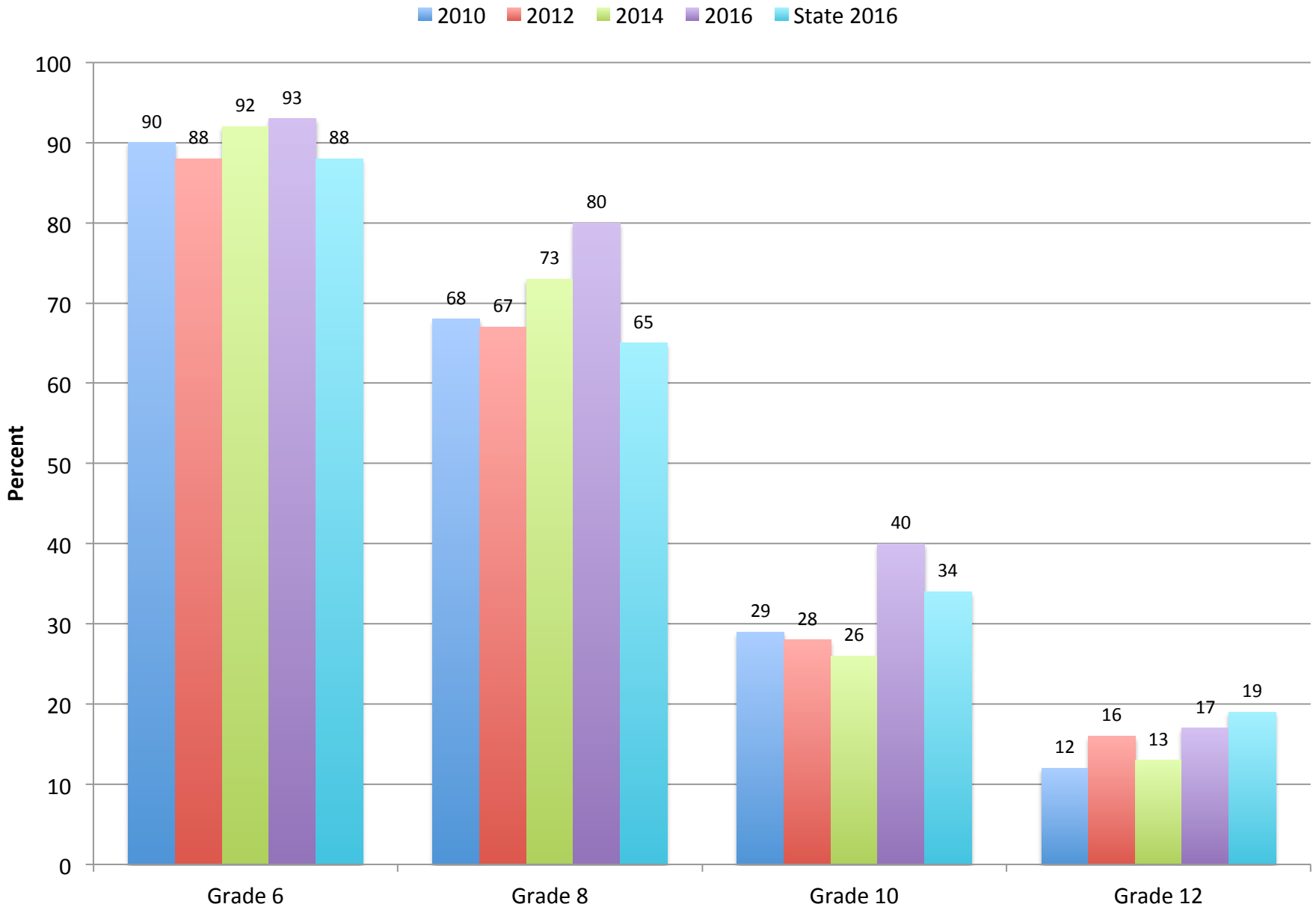
Perception of Neighborhood Norms - Marijuana

Percent of students who report that adults in their neighborhood think youth marijuana use is "very wrong"



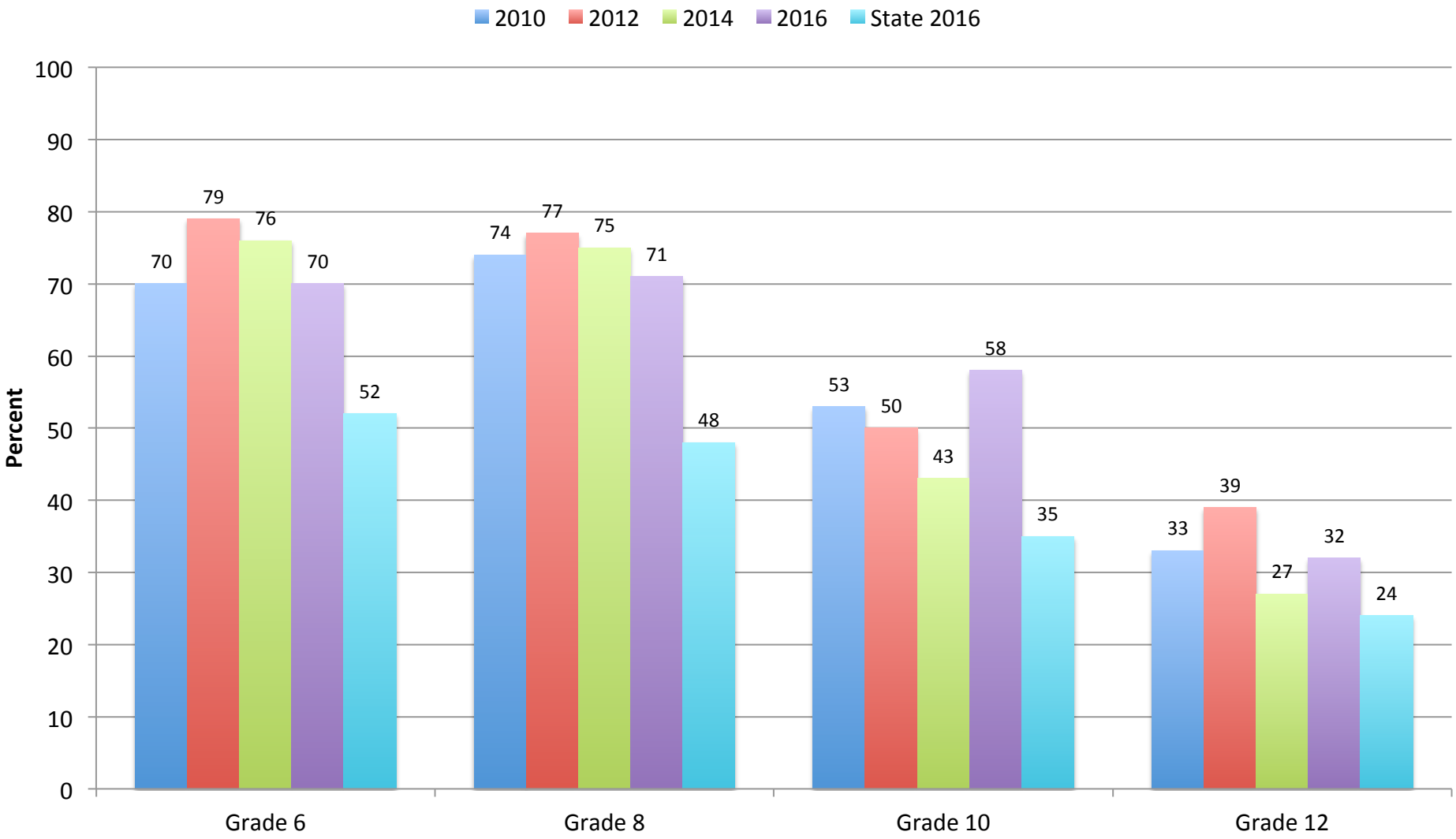
Perceived Availability of Marijuana

Percent of students who report marijuana would be "very hard" to get



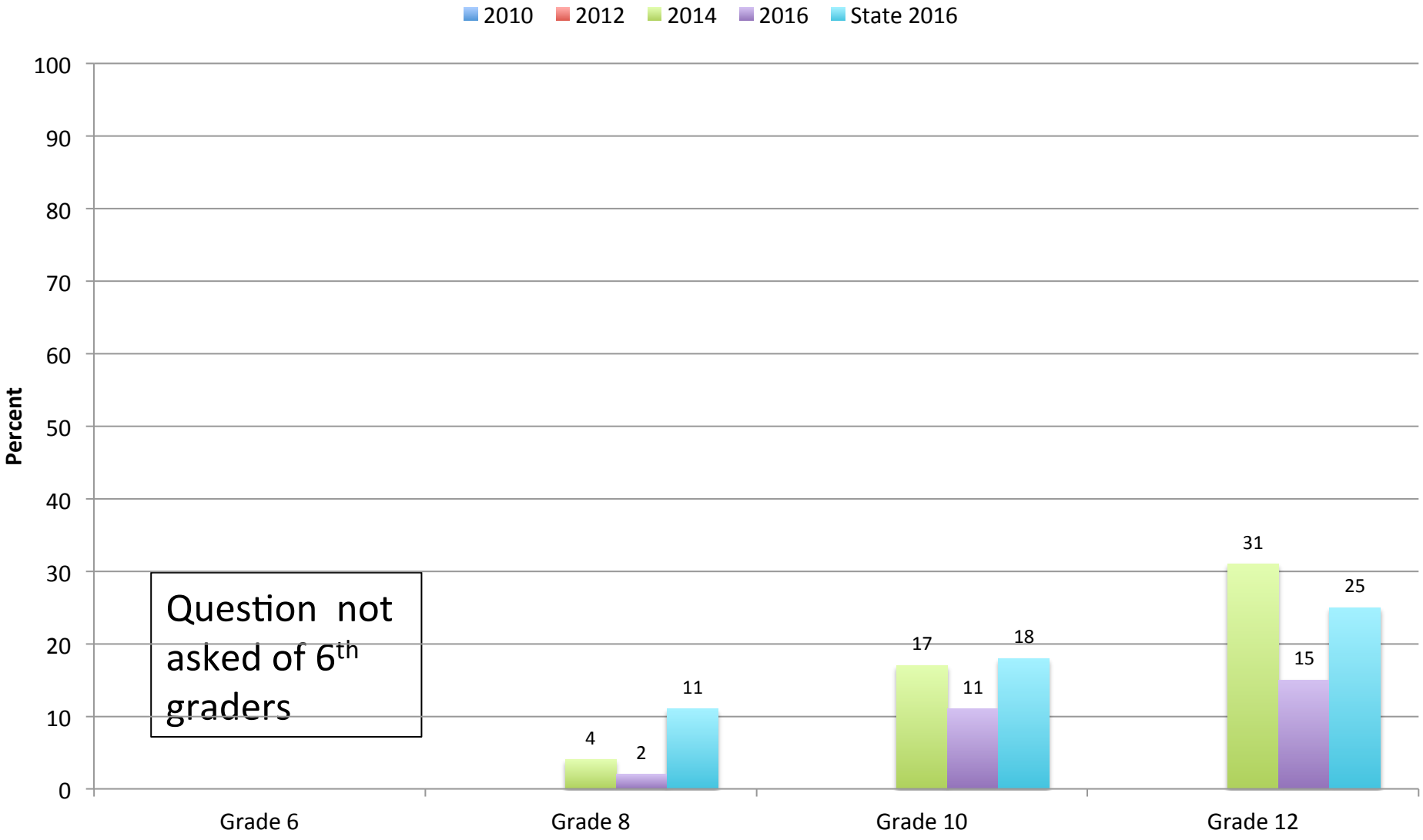
Perceived Risk of Regular Marijuana Use

Percent of students who report "great risk" of harm from using marijuana at least once or twice a week



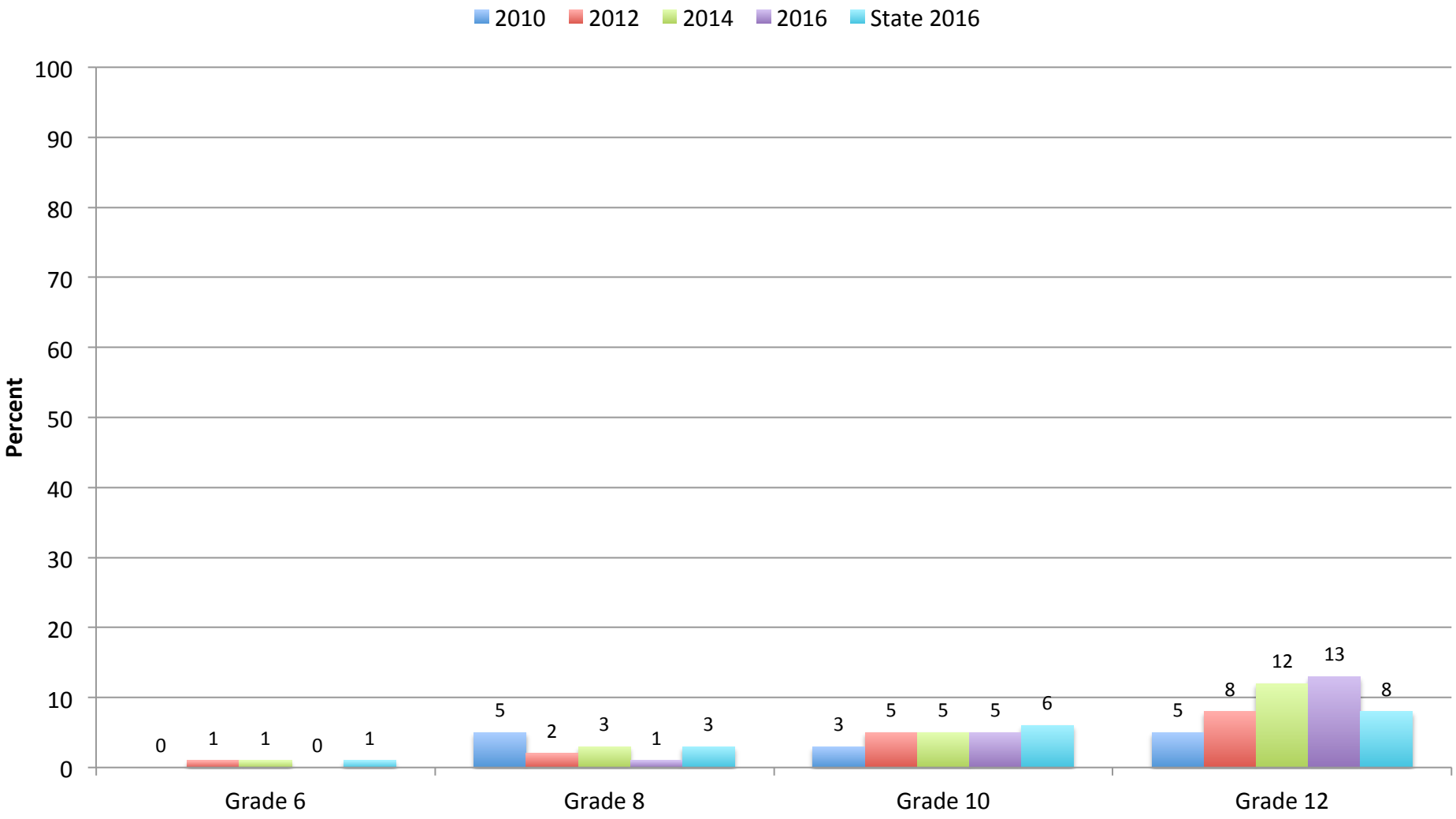
Riding with a Recent Marijuana User

Percent of students who report having ridden in the past 30 days with a driver who had been using marijuana



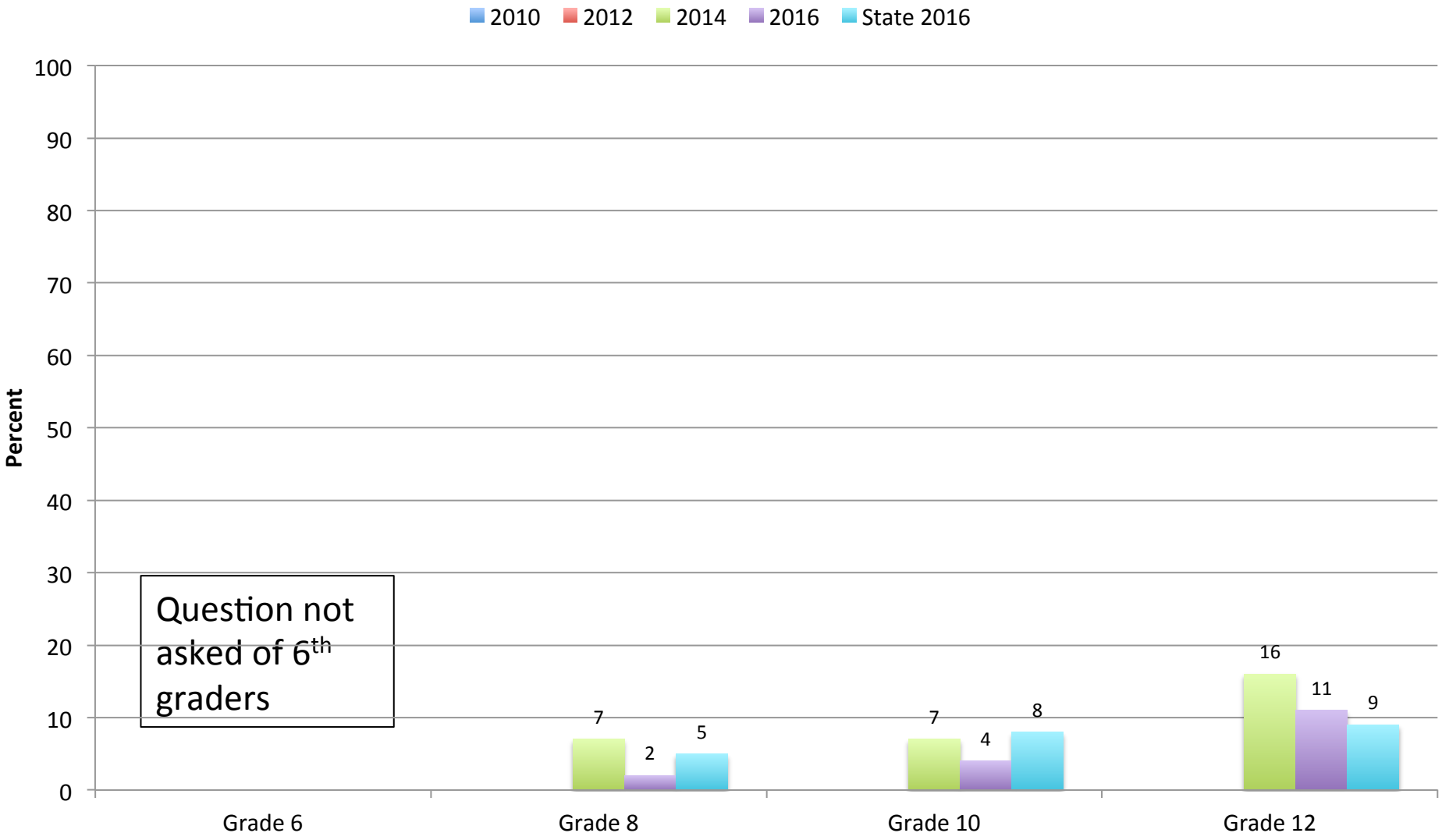
Current Illegal Drug Use

Percent of students who report using illegal drugs in the past 30 days (not including alcohol, tobacco or marijuana)



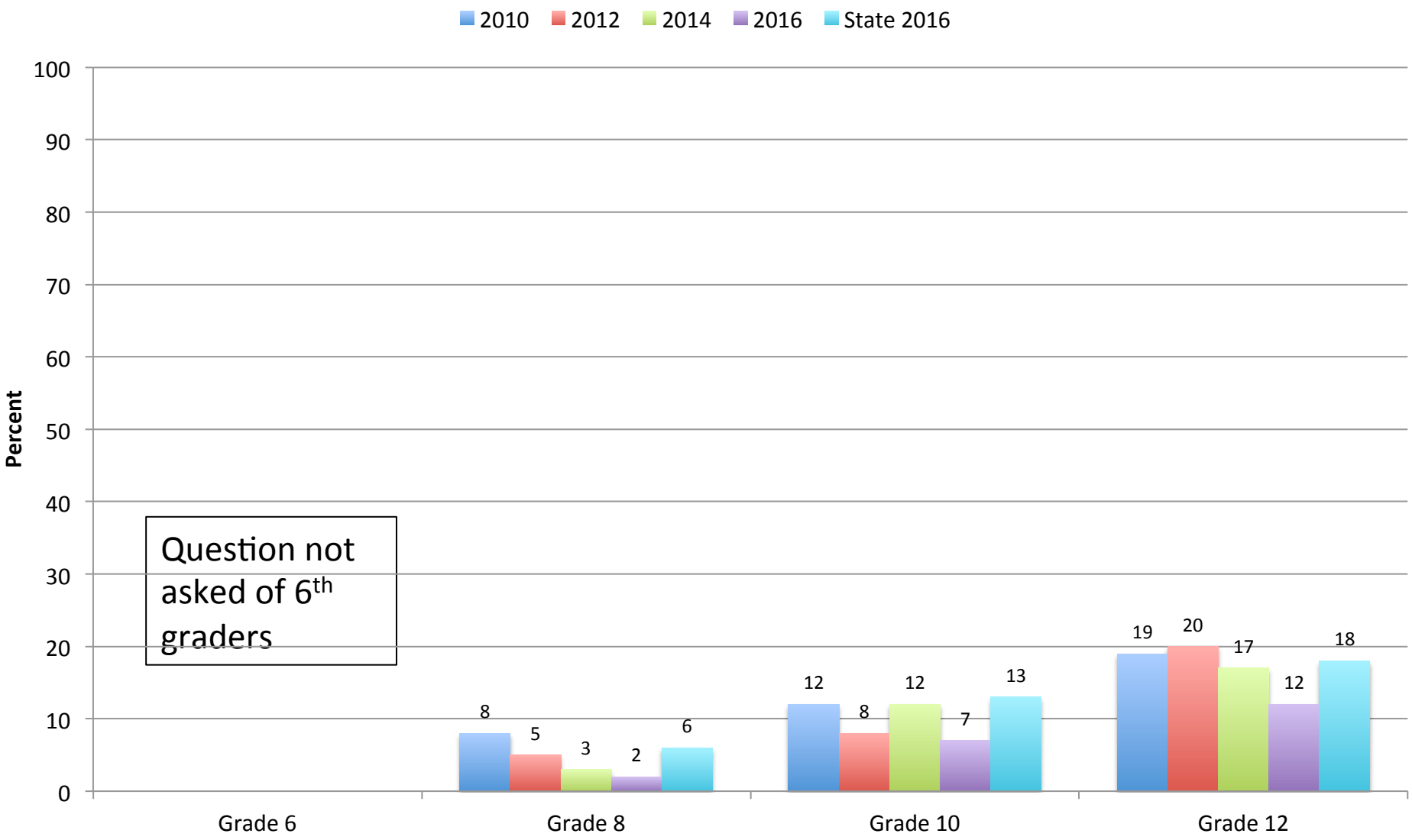
Current Prescription Drug Use

Percent of students who report using prescription drugs not prescribed to them in the past 30 days



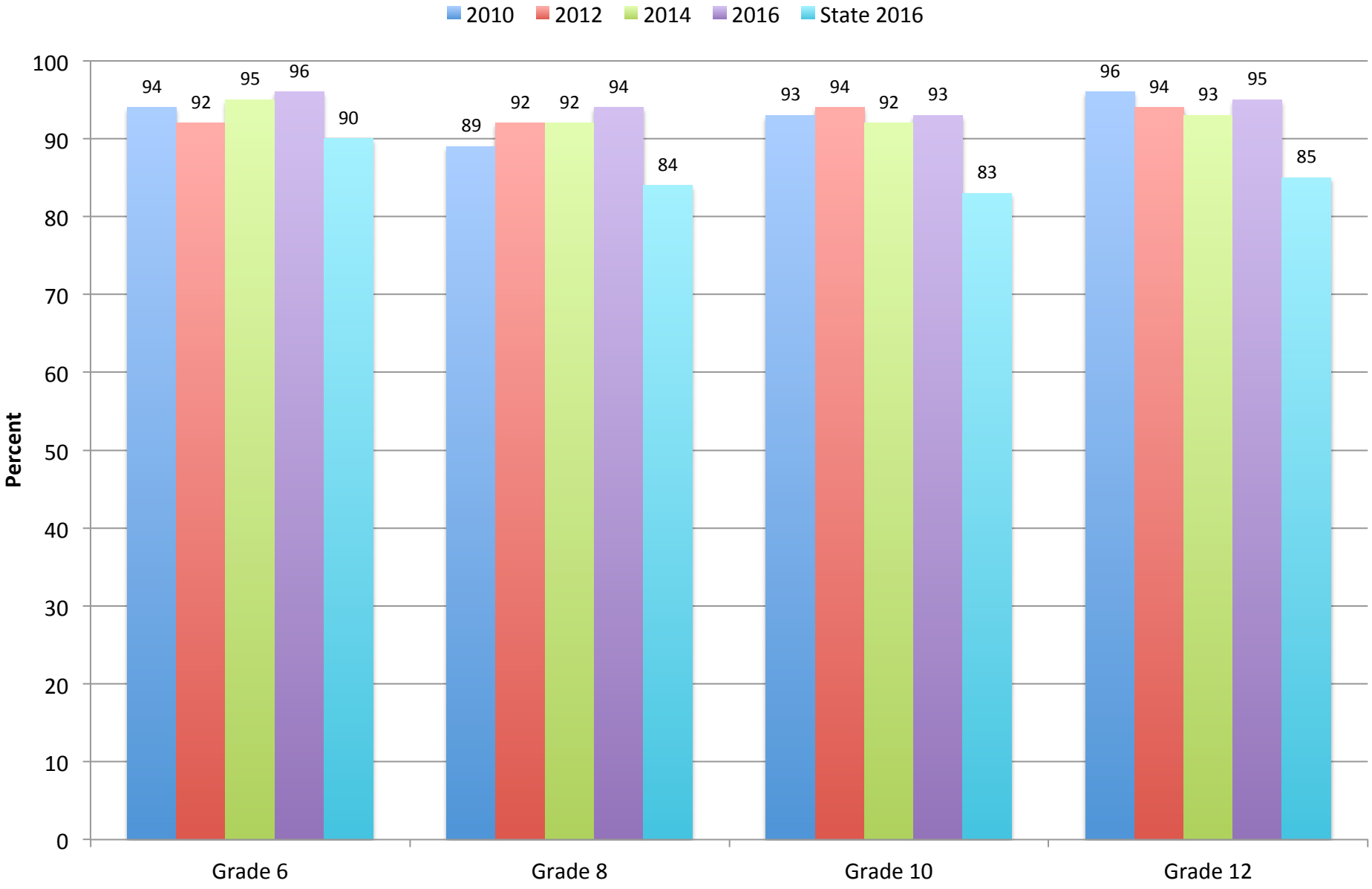
Substance Use at School

Percent of students who report being drunk or high at school in the past year



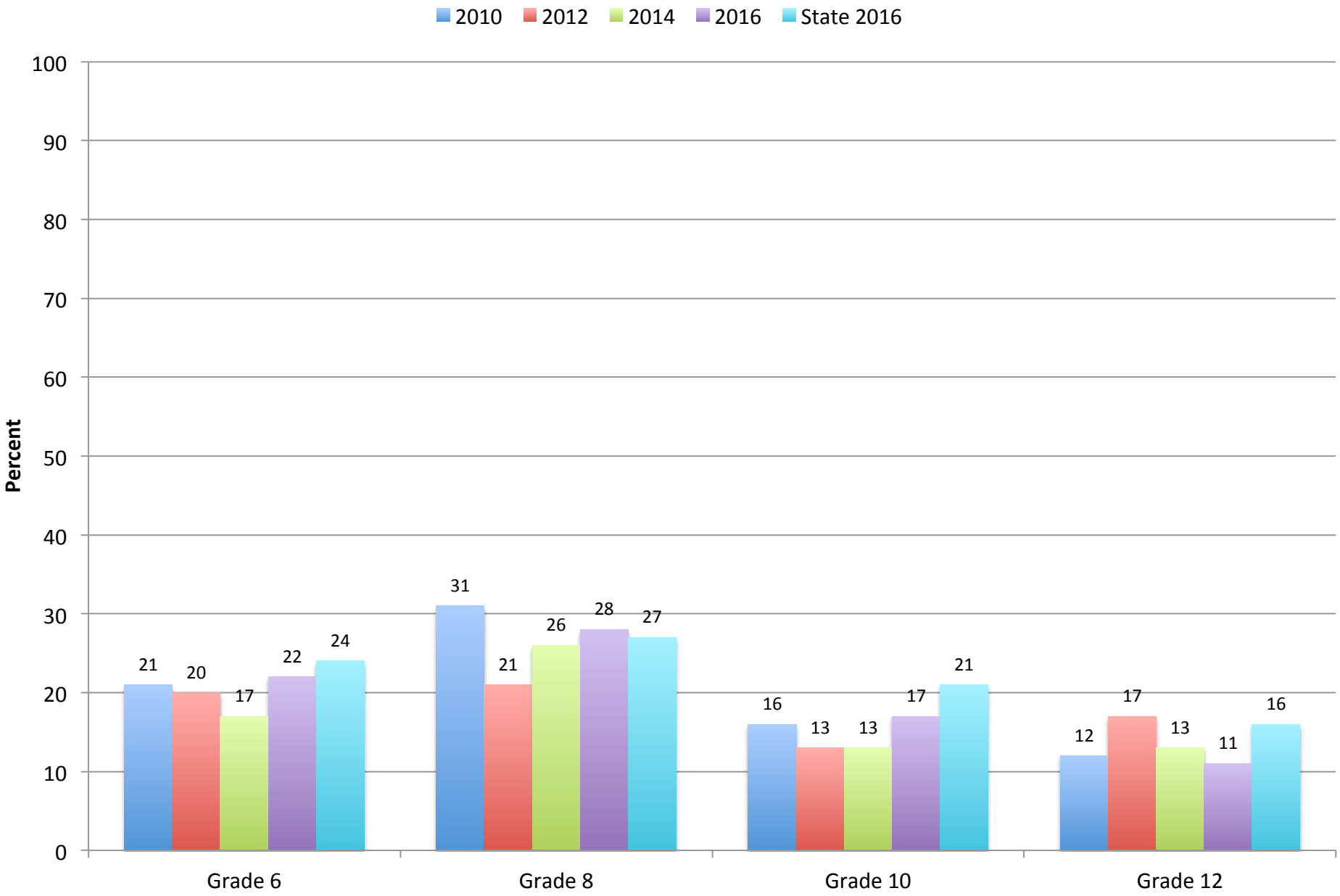
Feeling Safe at School

Percent of students who report that they feel safe at school



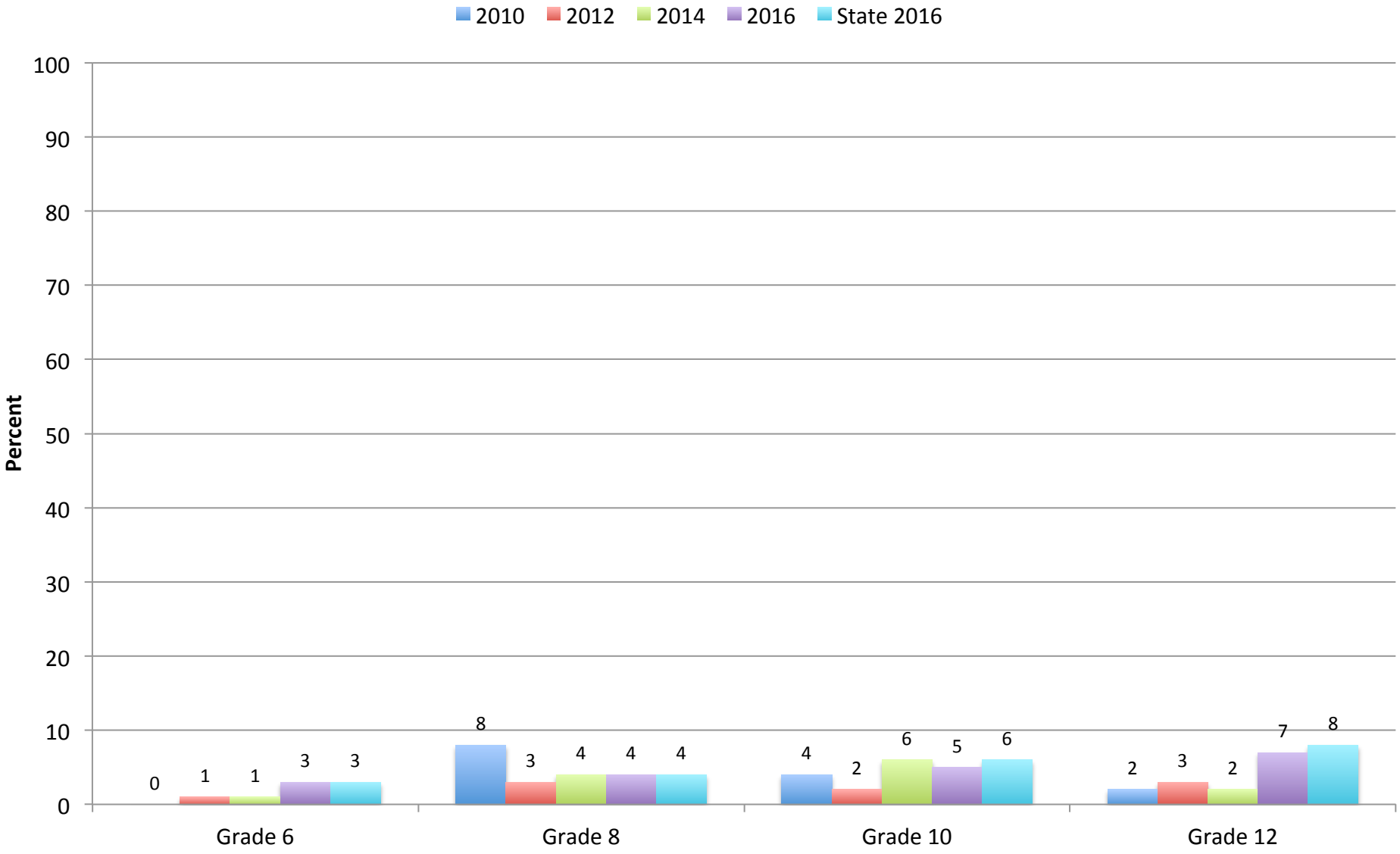
Physical Fighting

Percent of students who report being in a physical fight in the past year



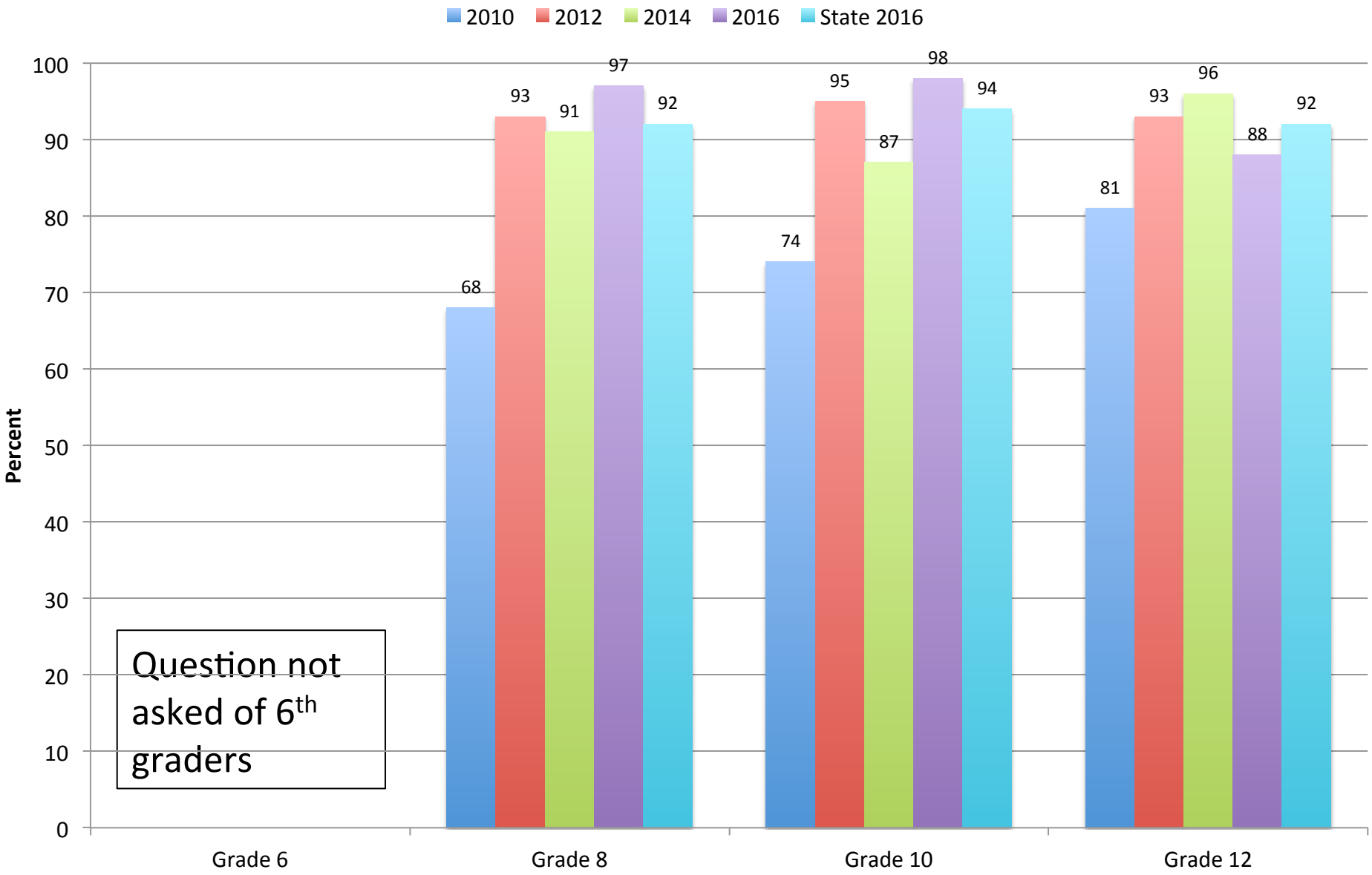
Weapon Carrying at School

Percent of students who report carrying a weapon on school property in the past 30 days



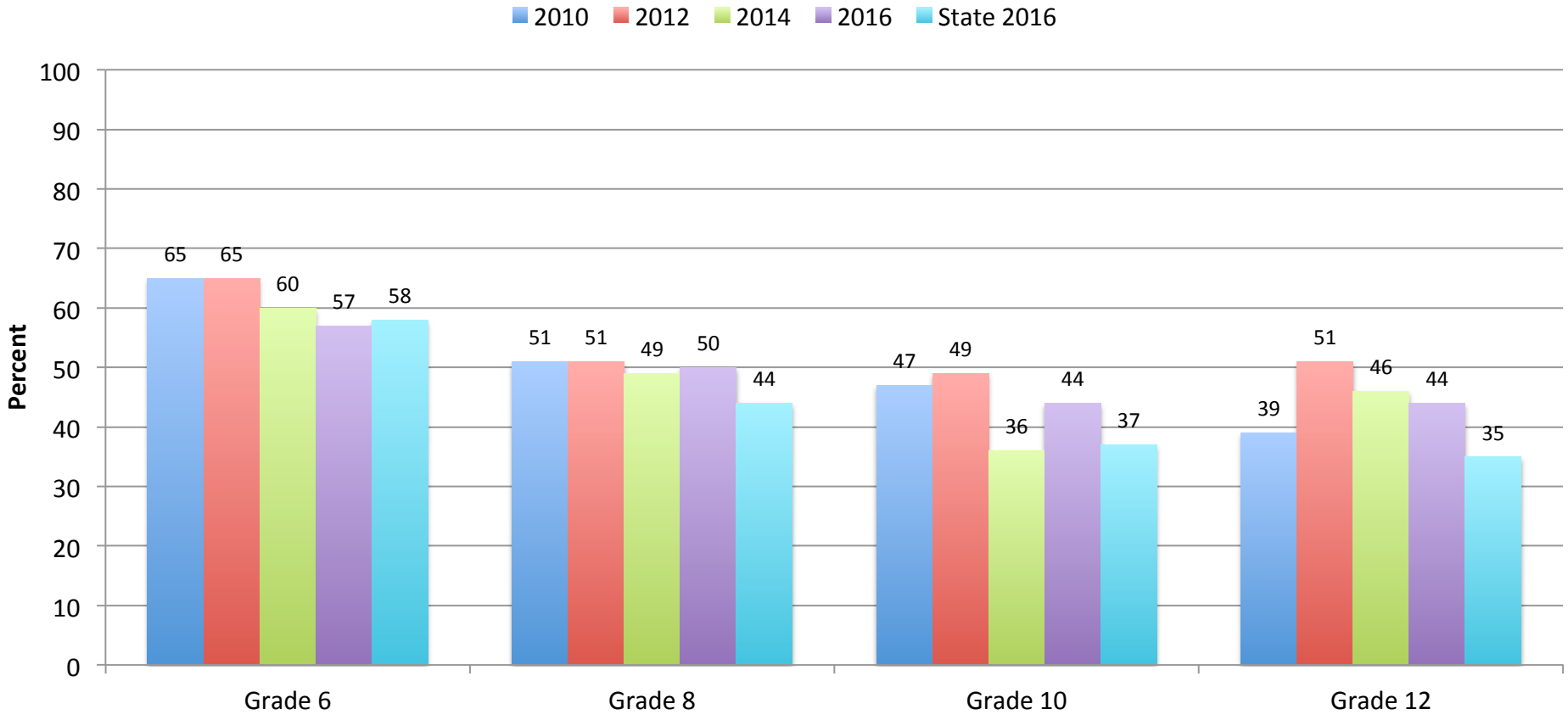
Opportunity for School Involvement

Percent of students who report that they have lots of chances for involvement in school activities



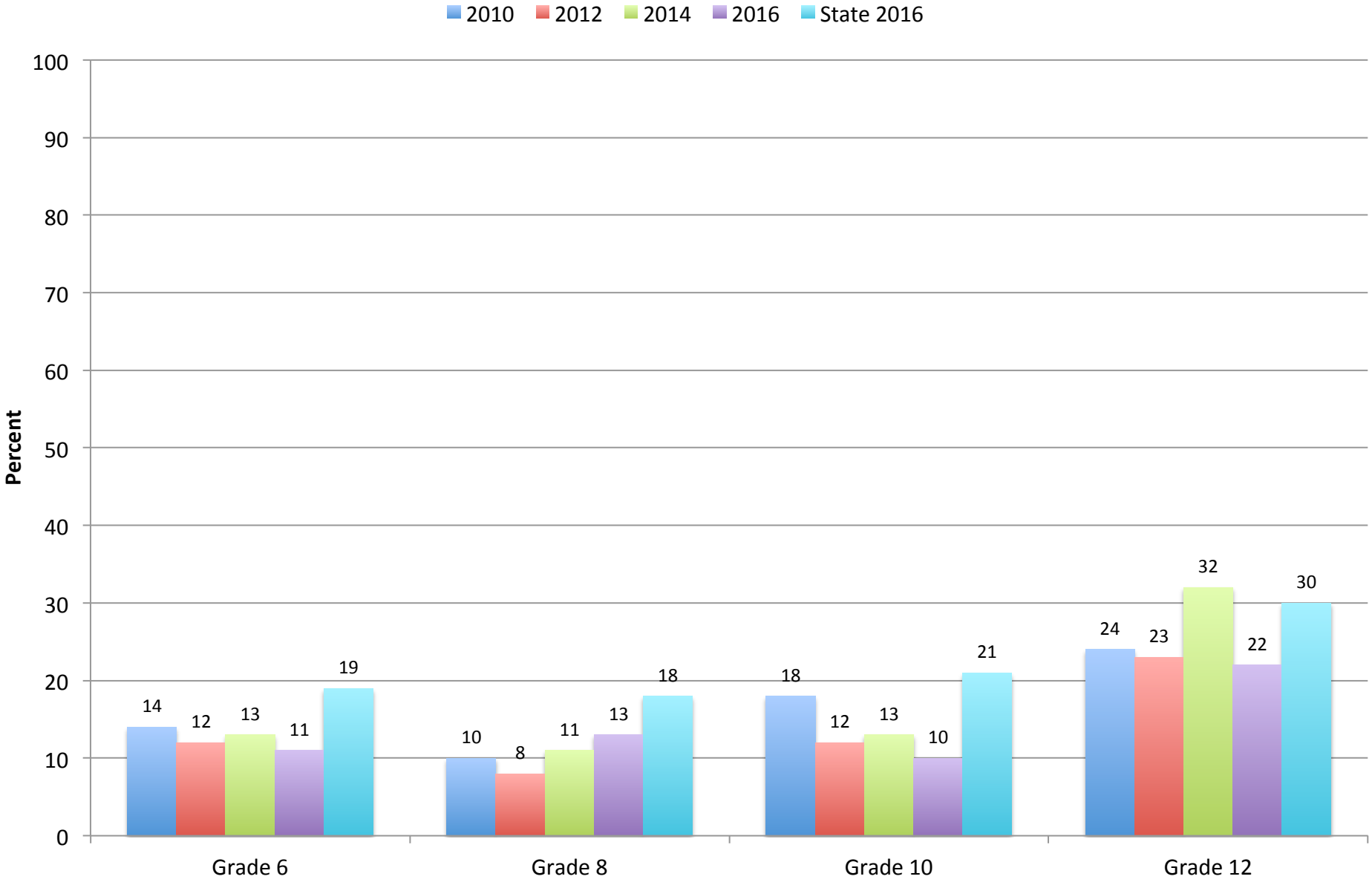
Enjoyment of School

Percent of students who report "often" or "almost always" enjoying being at school in the past year



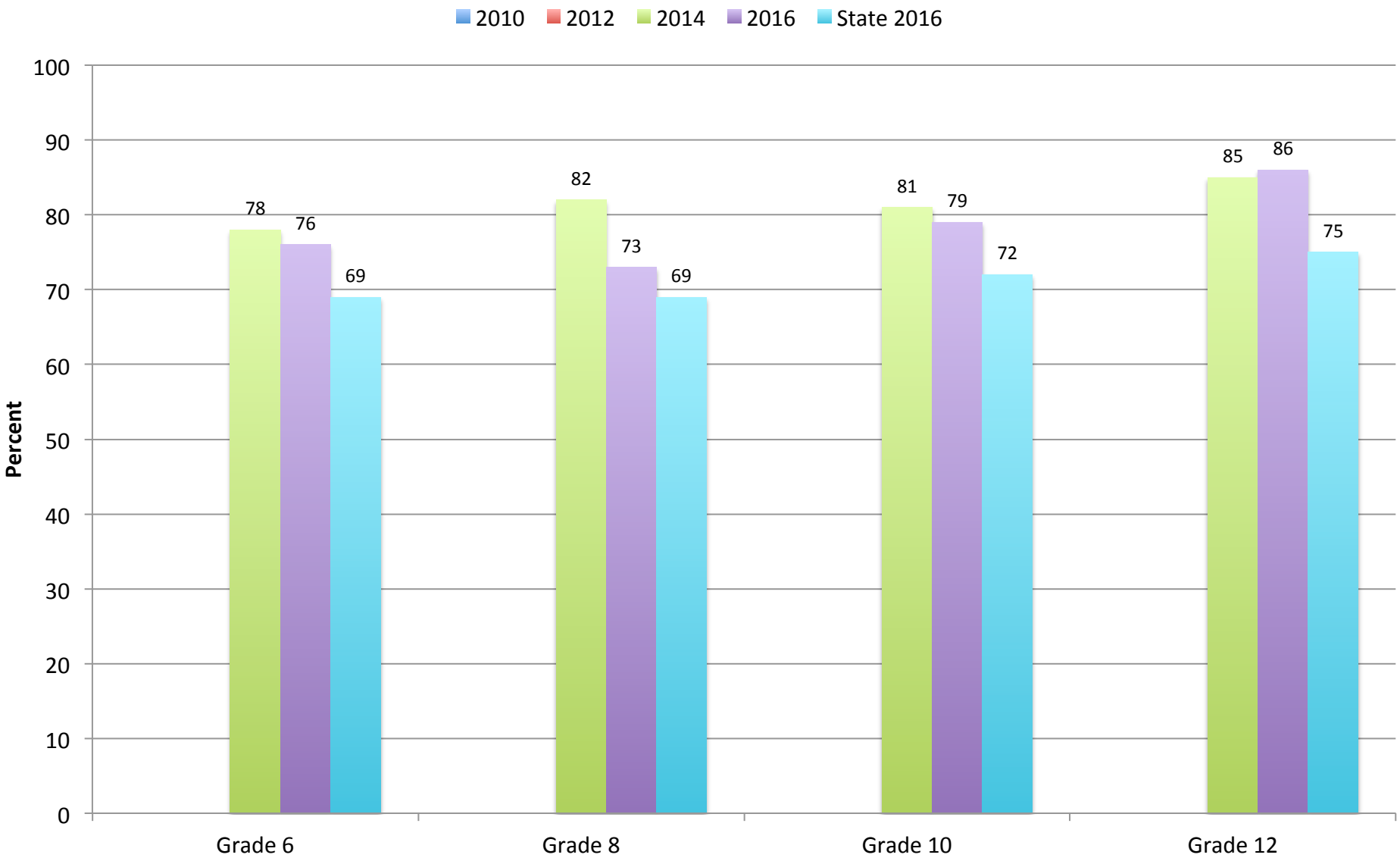
Skipping School

Percent of students who report skipping 1 or more whole days of school in the past 4 weeks



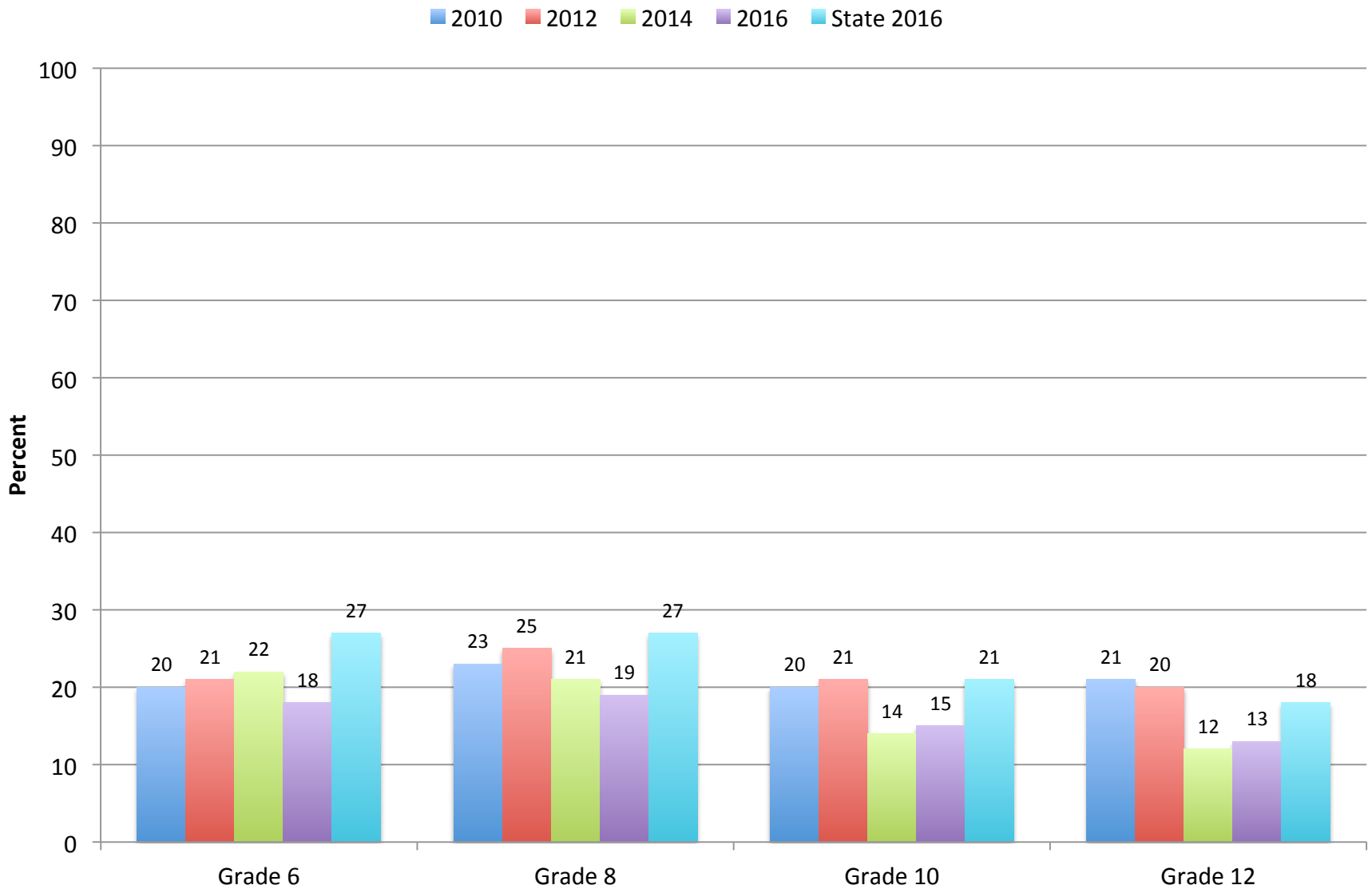
Social Emotional Skills

Percent of students who know how to handle disagreements, solve problems, consider effects of decisions, and be empathetic



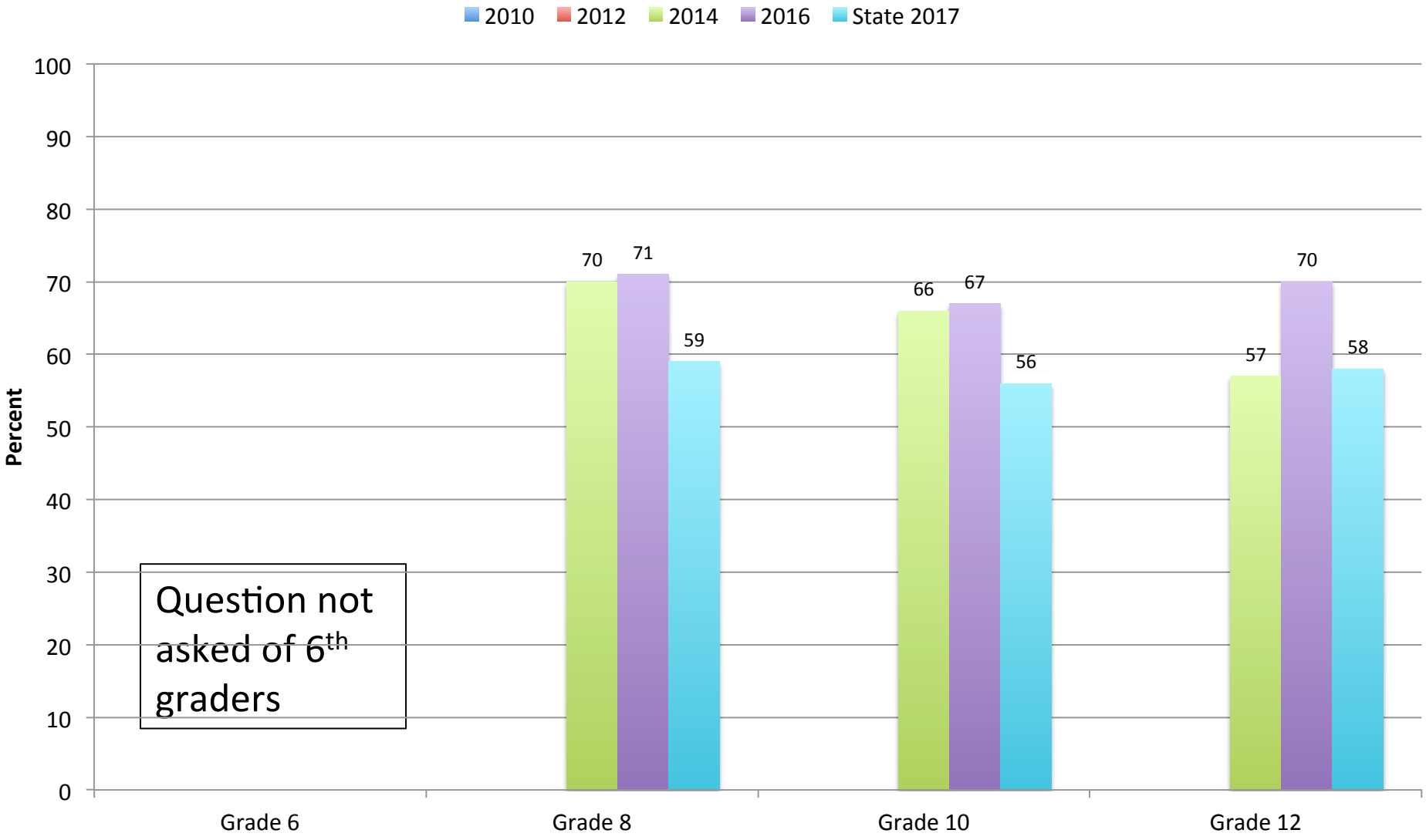
Bullying

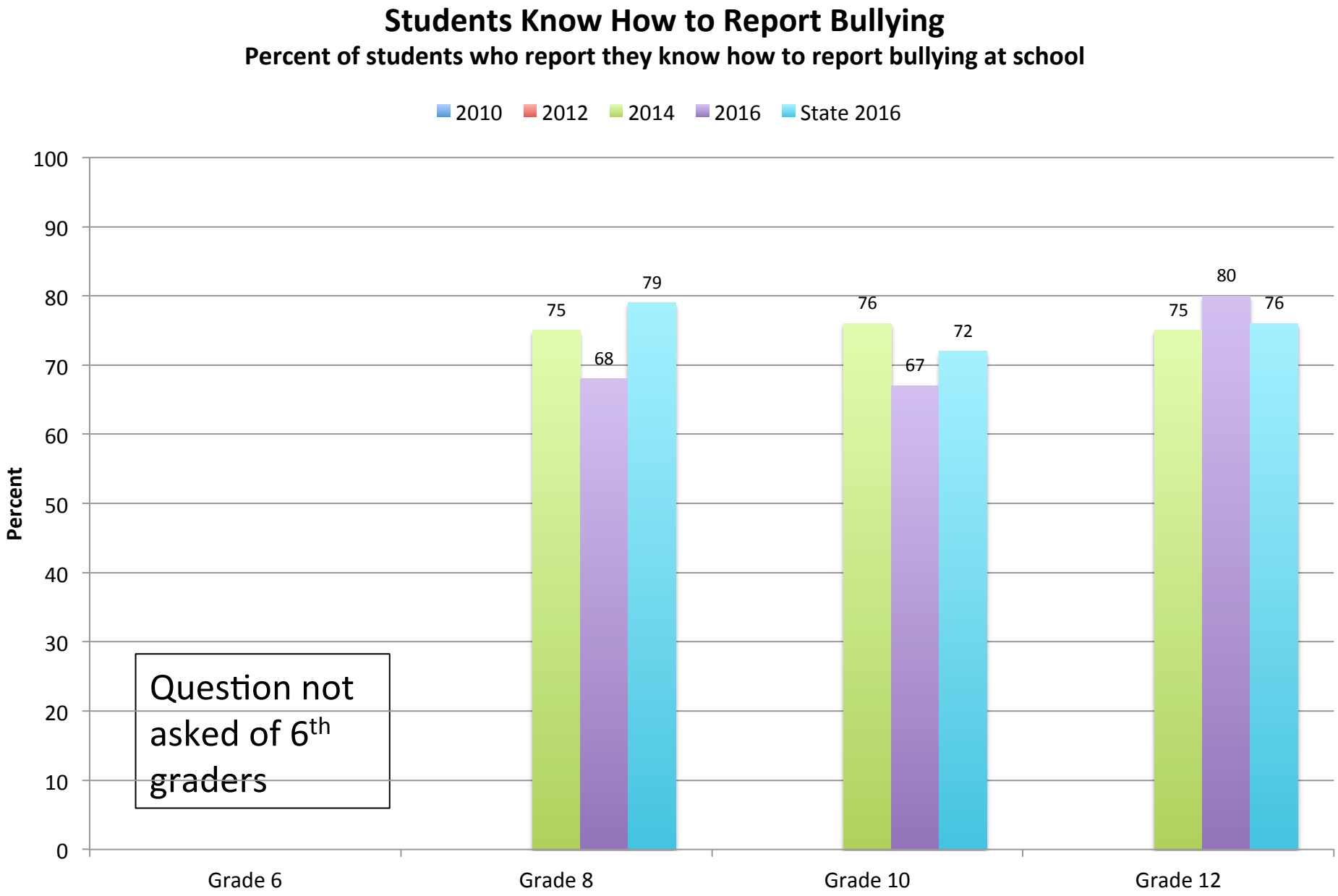
Percent of students who report being bullied in the past 30 days



School Tries to Stop Bullying

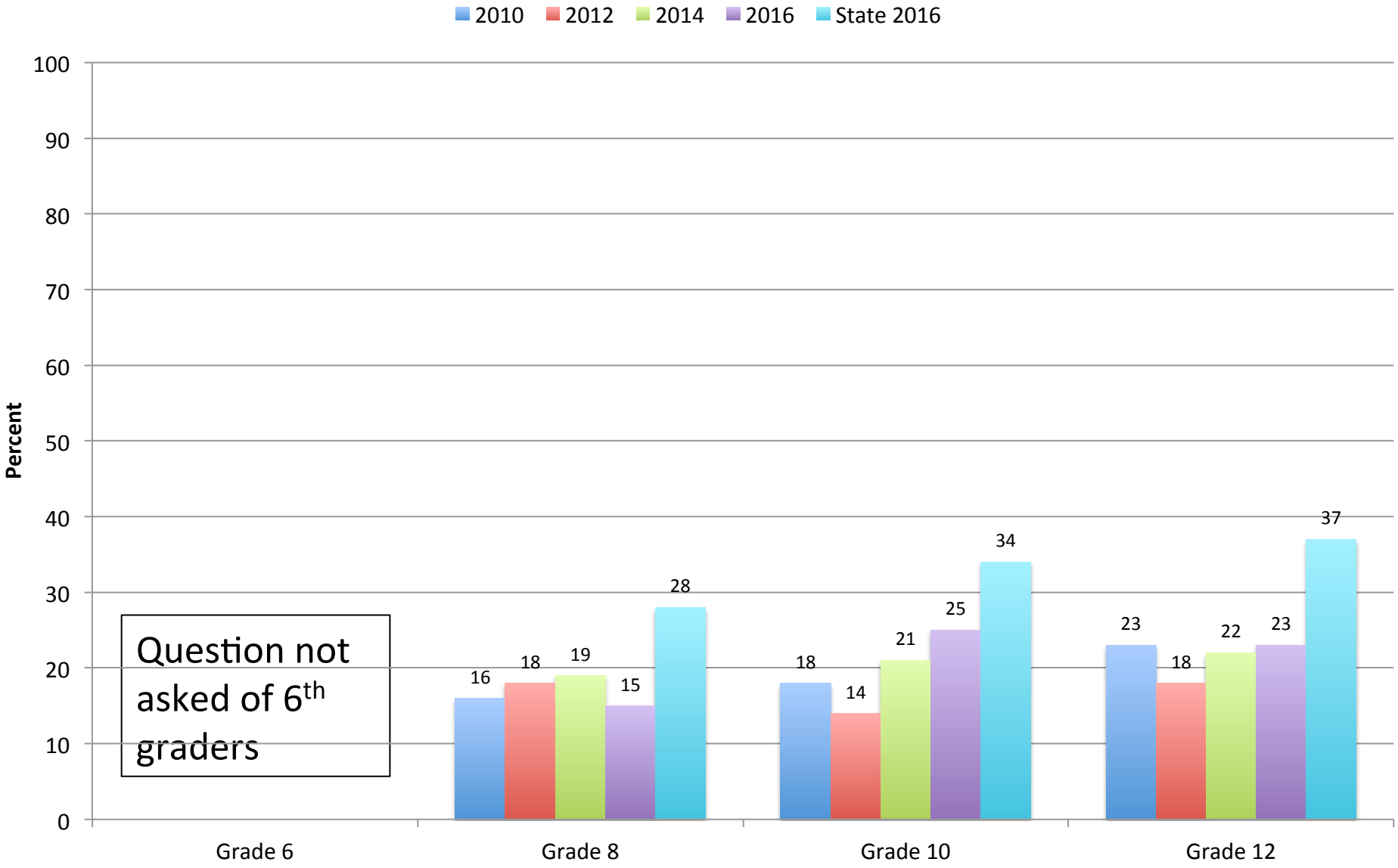
Percent of students who report teachers or other adults at school "almost always" or "often" try to stop bullying




Students Know How to Report Bullying
Percent of students who report they know how to report bullying at school
2010
2012
2014
2016
State 2016
Percent
100
90
80
70
60
50
40
30
20
10
0
75
68
79
76
67
72
75
80
76
Question not asked of 6th graders
Grade 6
Grade 8
Grade 10
Grade 12

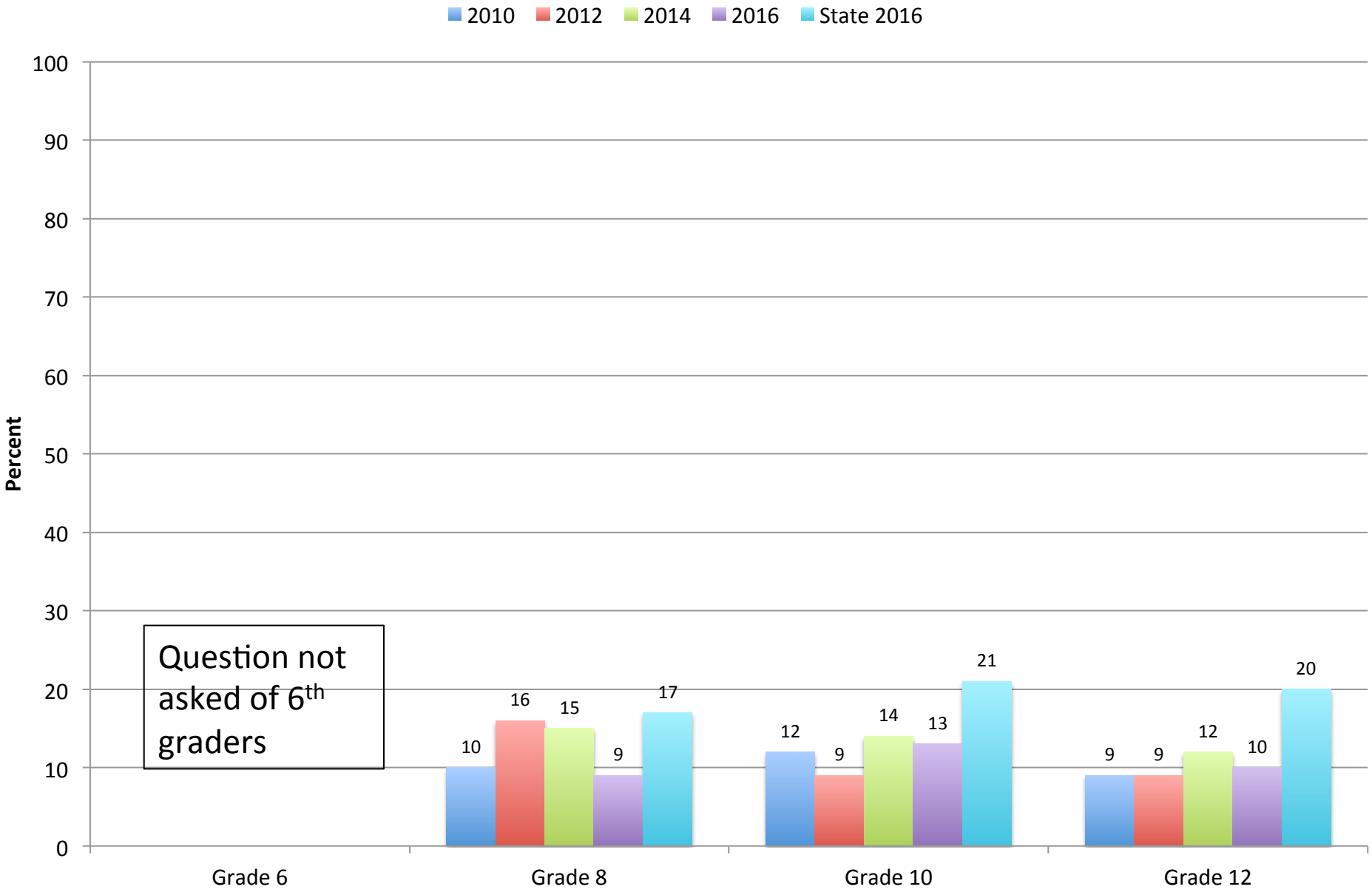
Depression

Percent of students who report experiencing depressive feelings in the past year



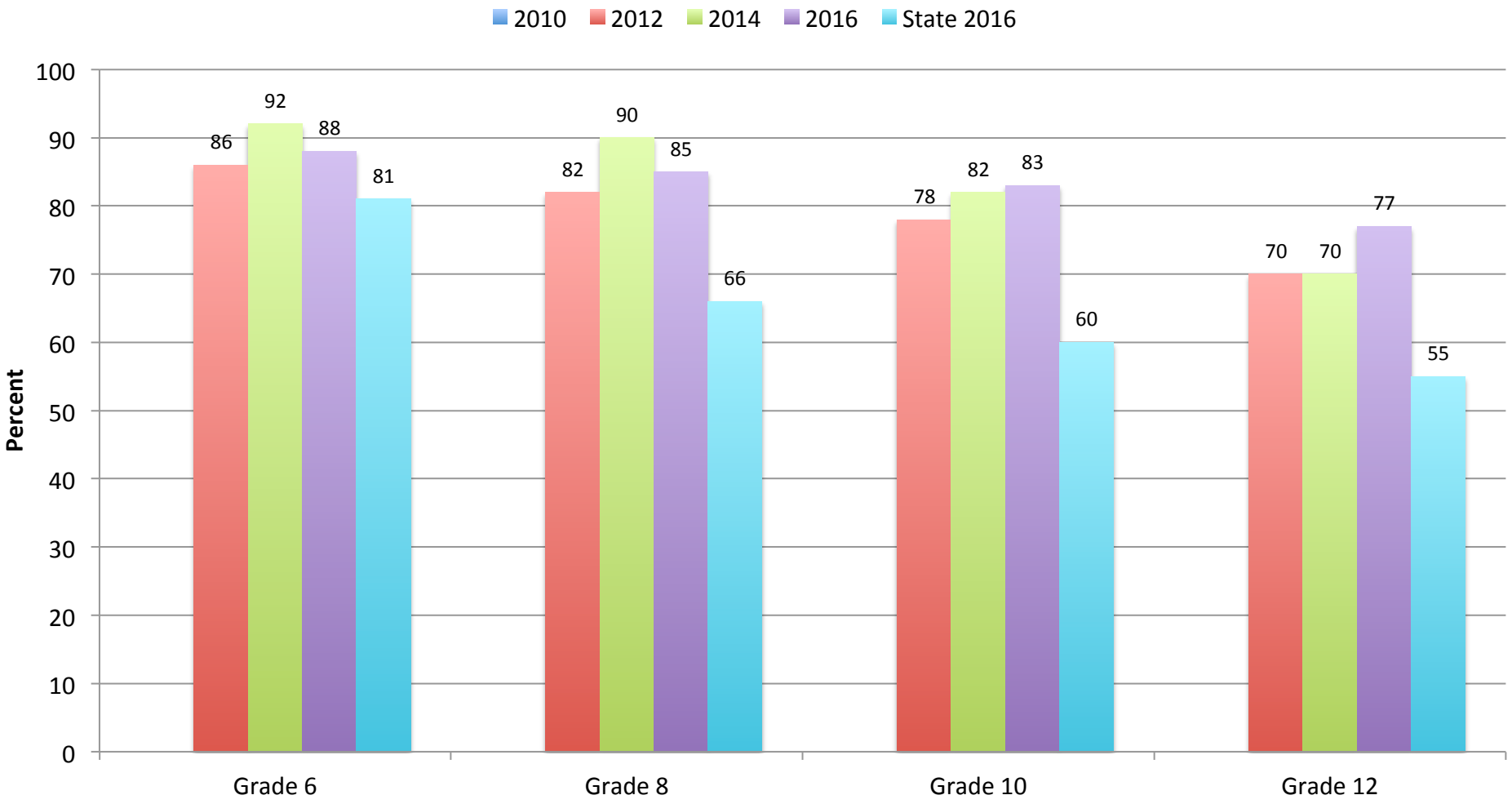
Contemplation of Suicide

Percent of students who report having seriously considered suicide in the past year



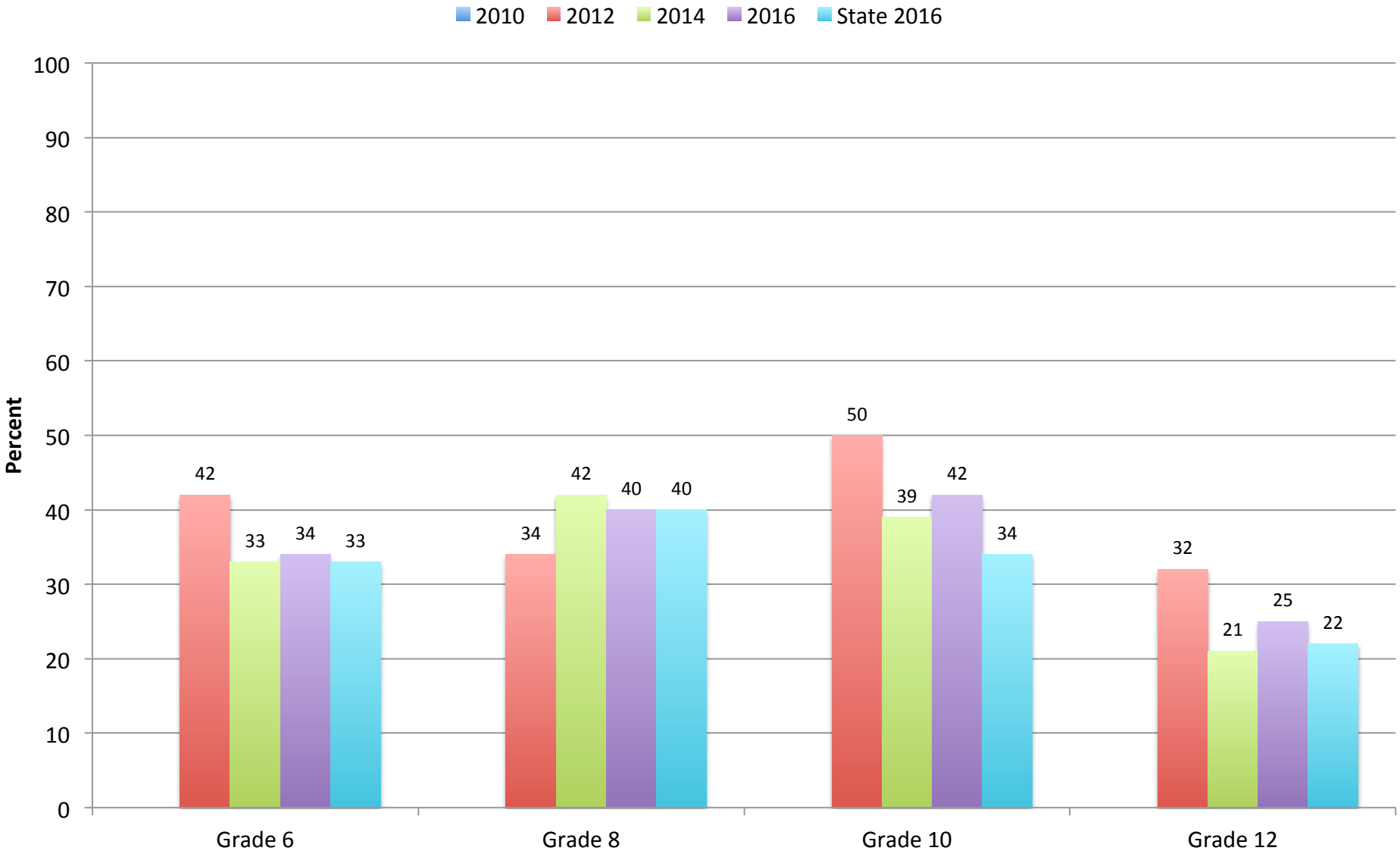
Eating Breakfast

Percent of students who report eating breakfast today



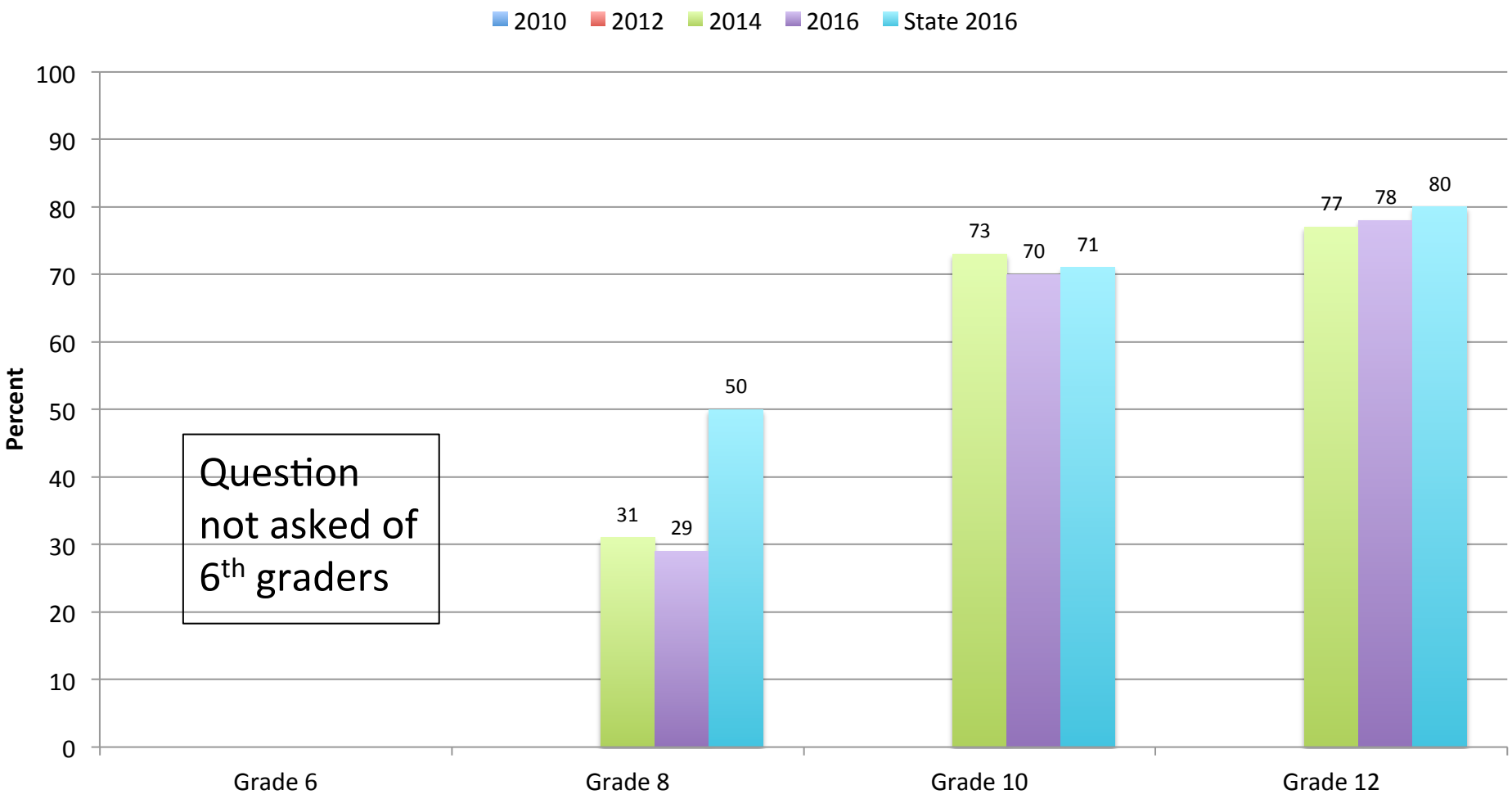
Walking/Biking To or From School

Percent of students who report walking or riding a bicycle to or from school during an average week



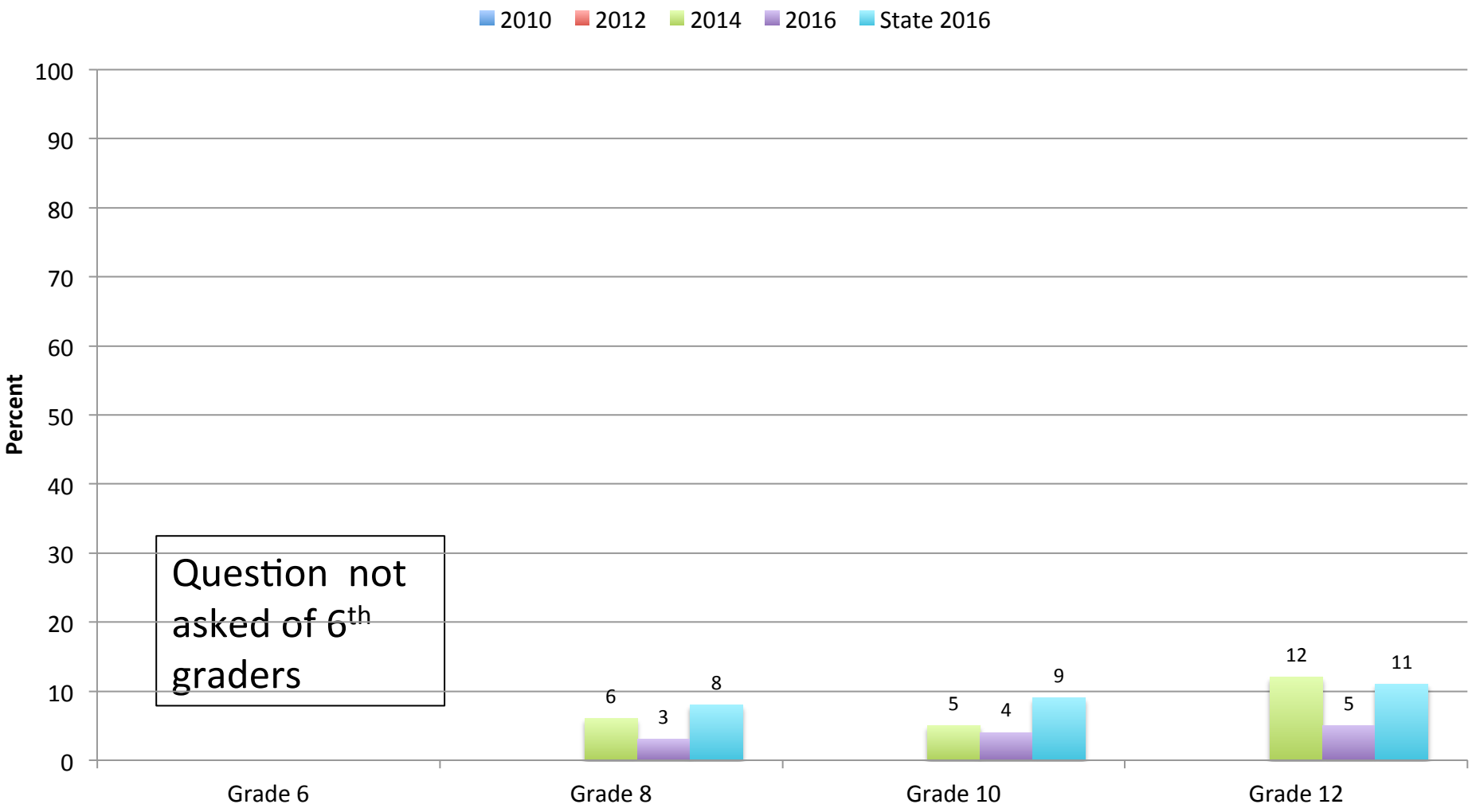
Sleep on a School Night

Percent of students who report sleeping less than 8 hours on an average school night



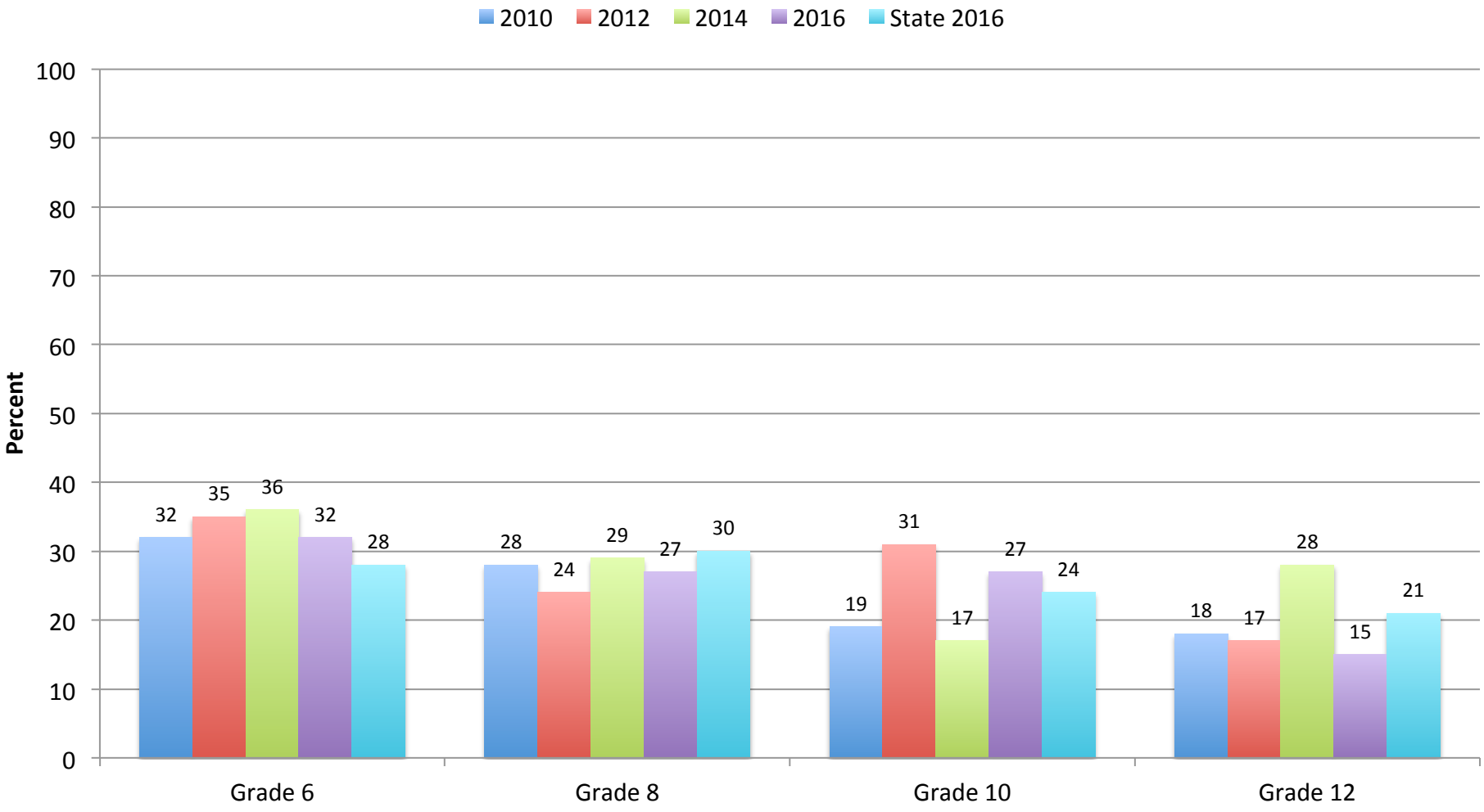
Excessive Sugar Sweetened Beverage Consumption

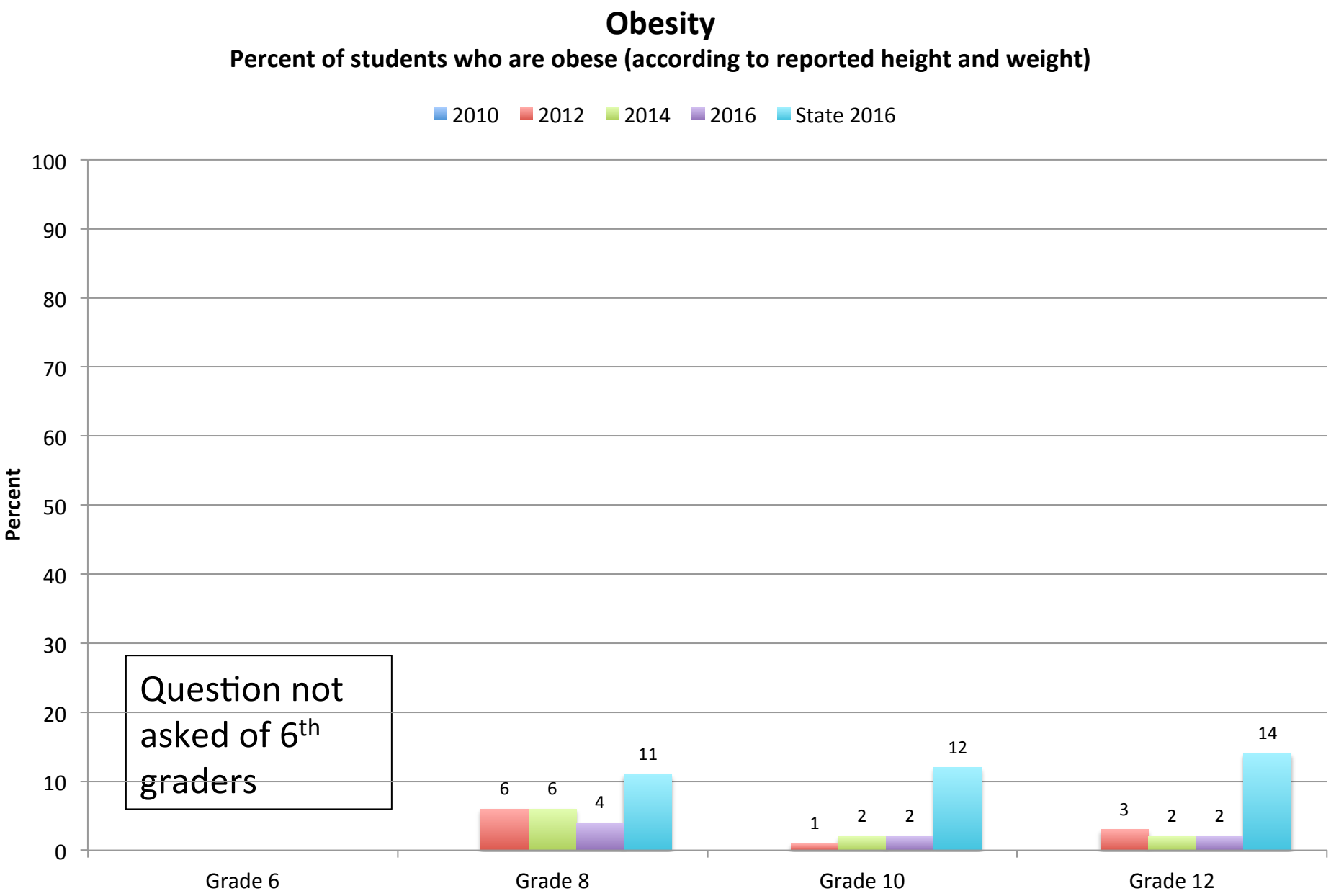
Percent of students who report drinking sugar sweetened beverages 2 or more times a day



60 Minutes of Physical Activity per Day

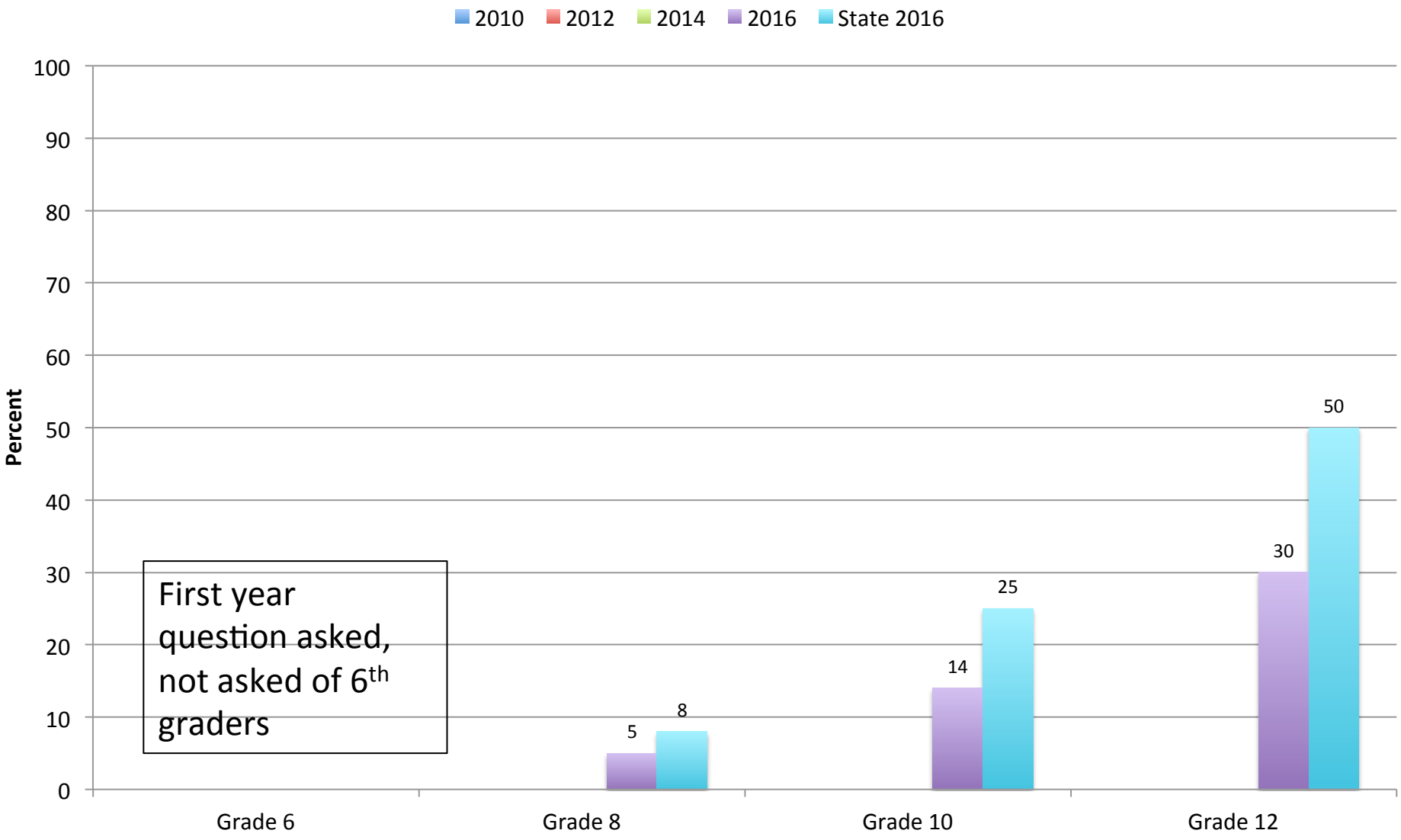
Percent of students who report being physically active 60 minutes per day, 7 days per week




Obesity
Percent of students who are obese (according to reported height and weight)
2010
2012
2014
2016
State 2016
Percent
100
90
80
70
60
50
40
30
20
10
0
Question not asked of 6th graders
6
6
4
11
1
2
2
12
3
2
2
14
Grade 6
Grade 8
Grade 10
Grade 12

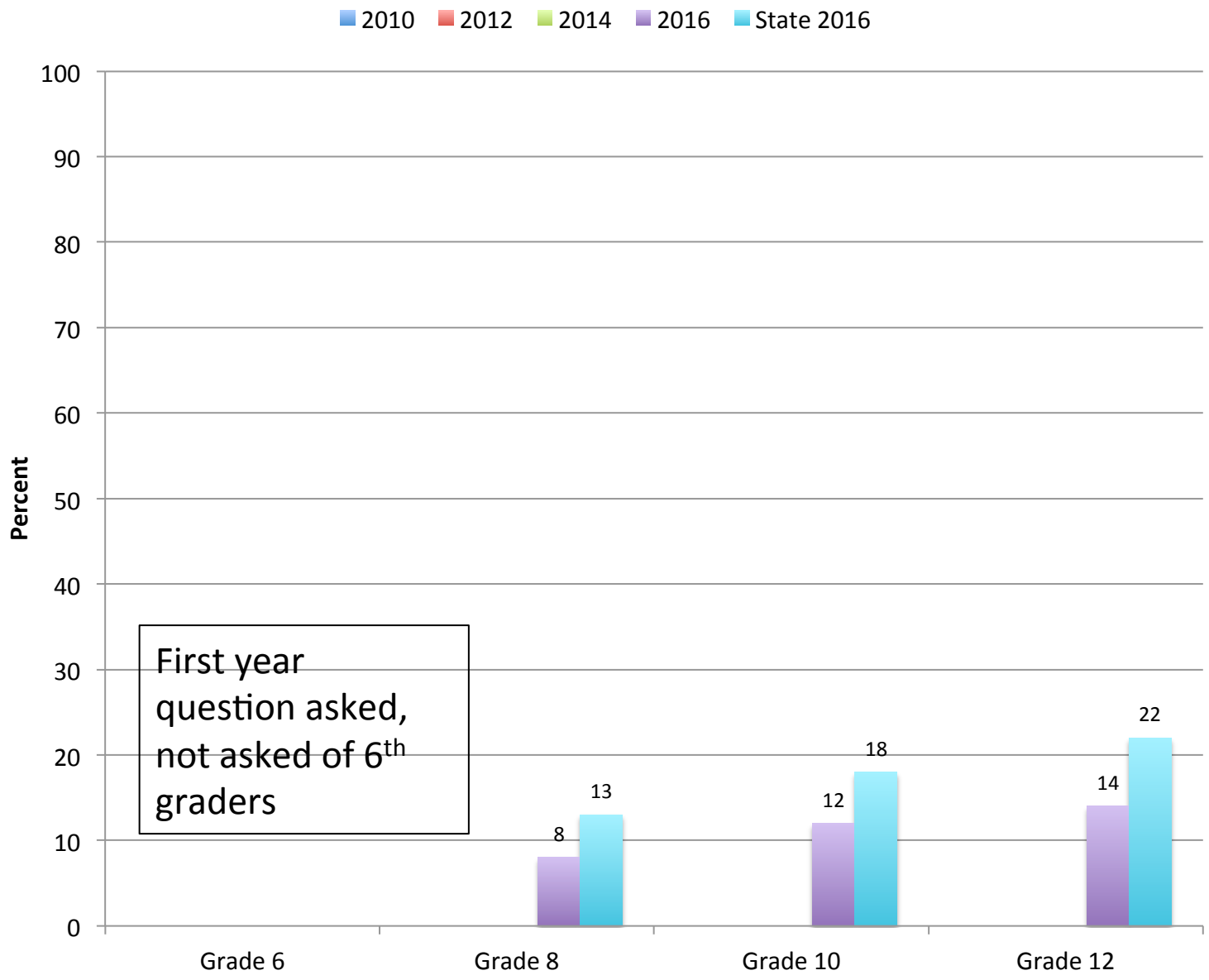
Lifetime Sexual Activity

Percent of students who report ever having sexual intercourse in their lifetime



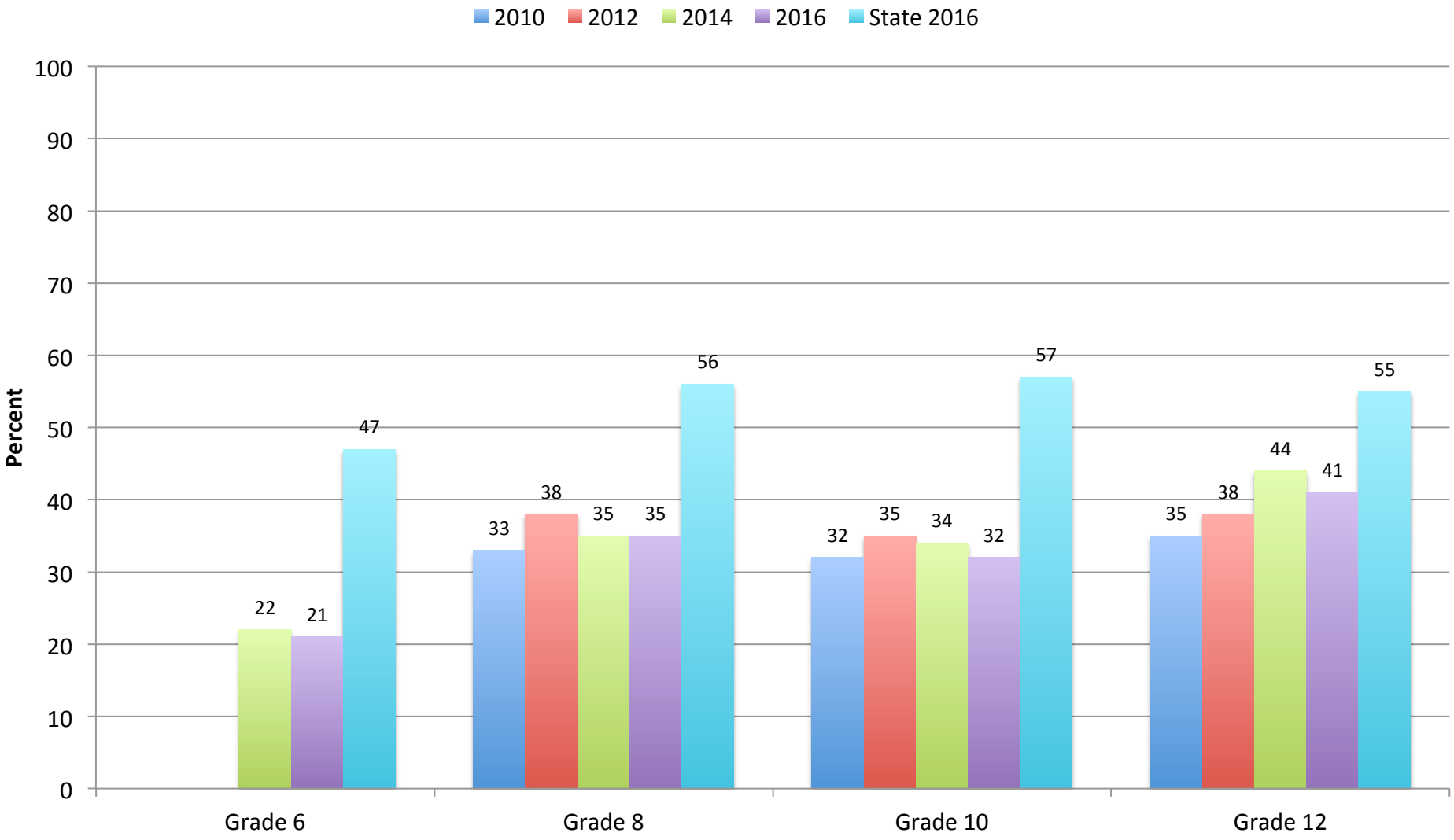
Lifetime Sexual Abuse

Percent of students who report having ever been in a in a situation where someone made them engage in kissing, sexual touch or sexual intercourse when they did not want to



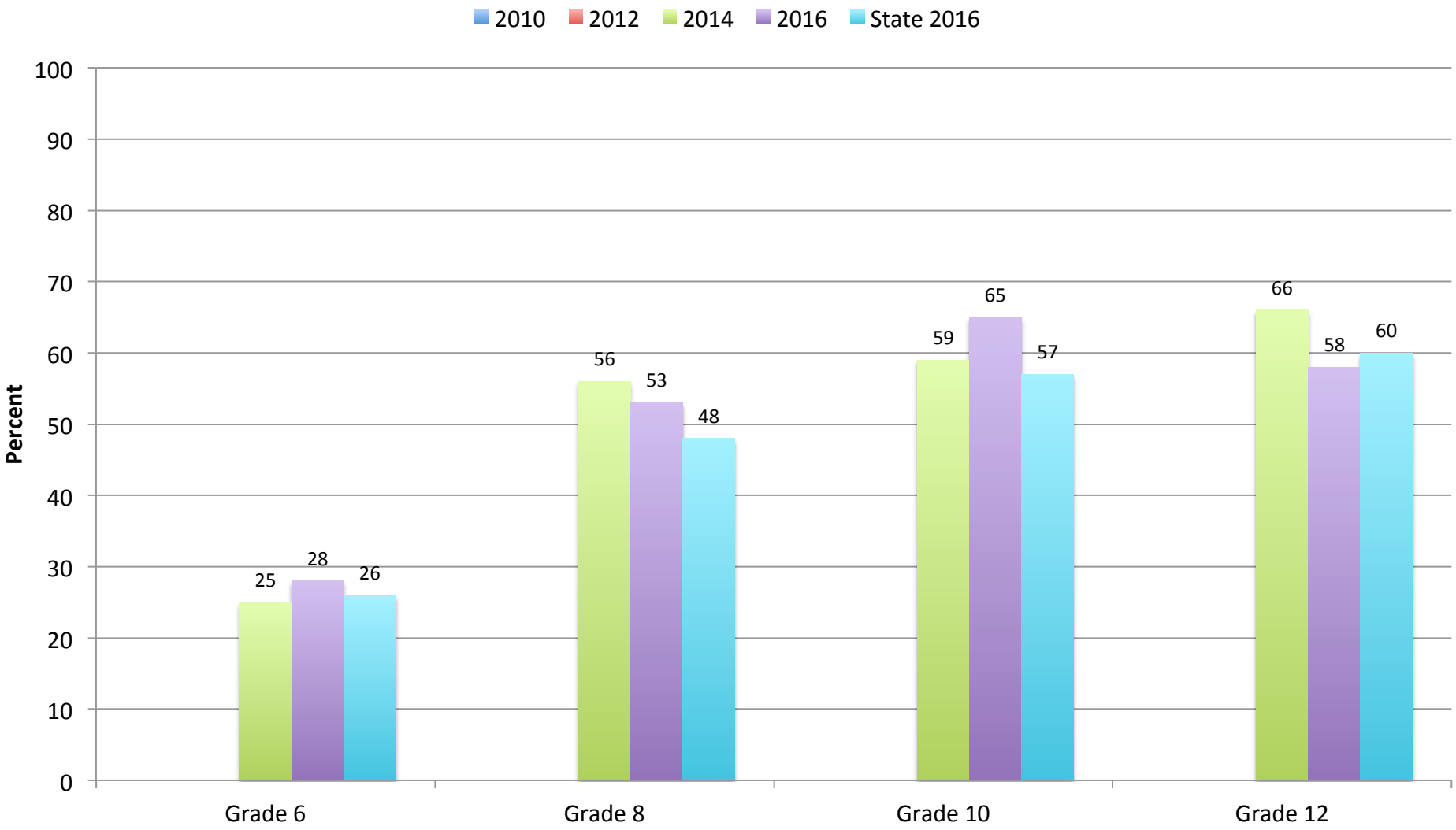
Excessive Television/Video Game Use

Percent of students who report 3 or more hours of watching television, playing video games or using the computer for fun on an average school day



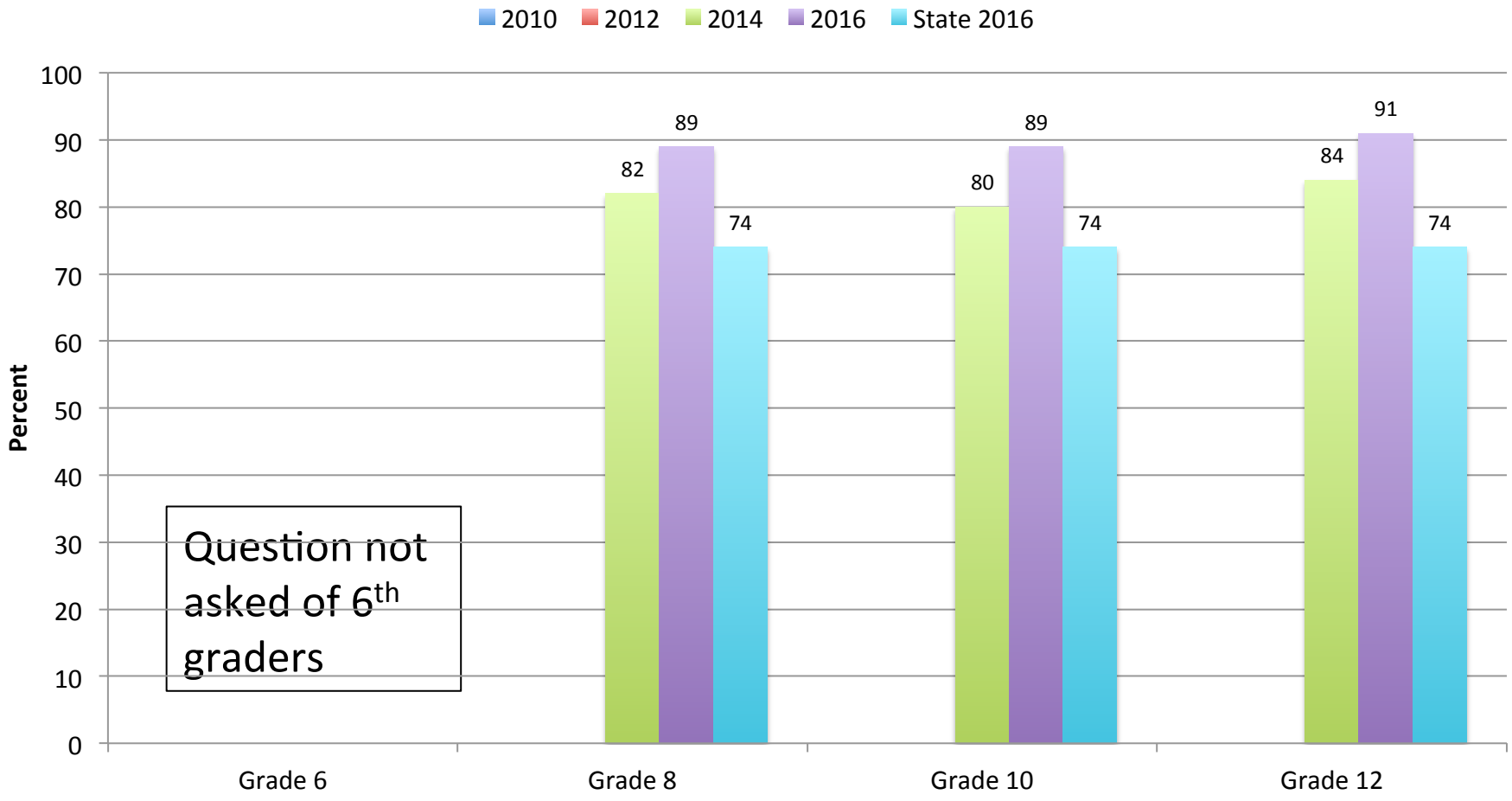
Riding with a Texting Driver

Percent of students who report having ridden in the past 30 days with a driver who was texting or emailing



Someone in Community to Talk To

Percent of students who report having an adult in their neighborhood or community they can talk to about something important



Mercer Island School District

Demographic Trends and Enrollment Projections

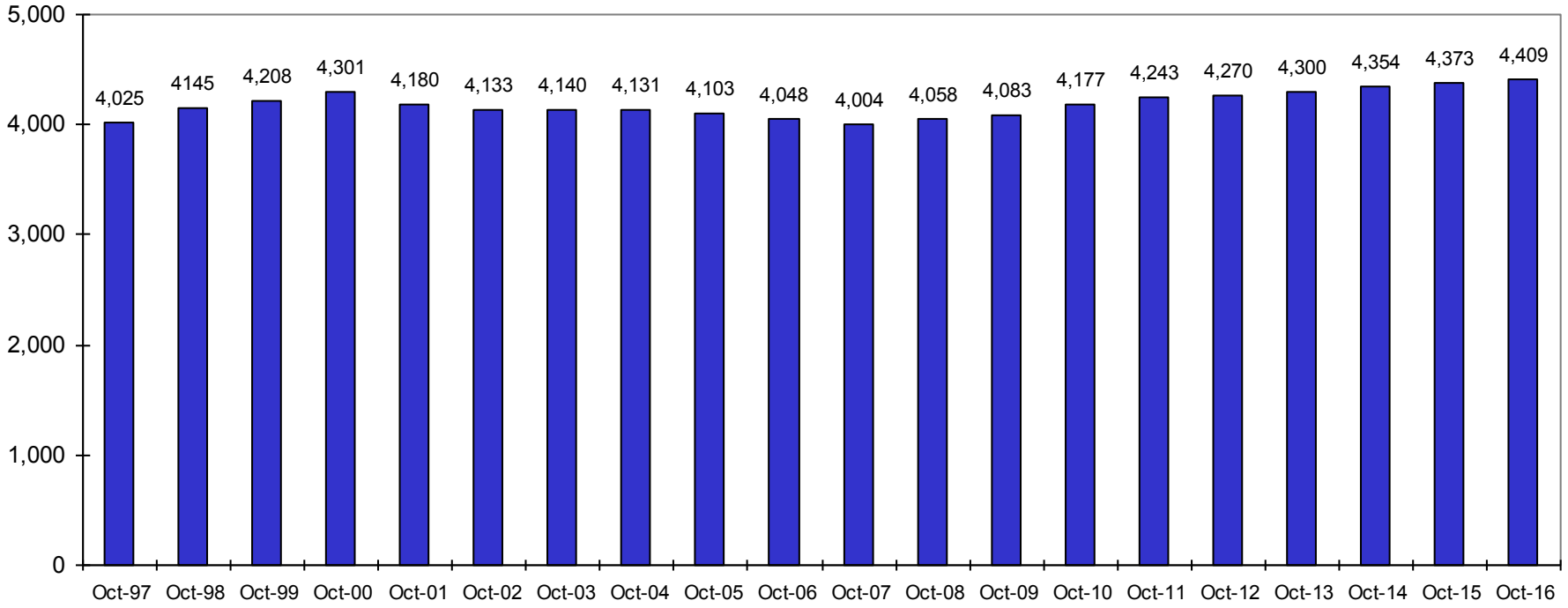
Prepared by
William L. (“Les”) Kendrick Ph.D.

Educational Data Solutions, LLC

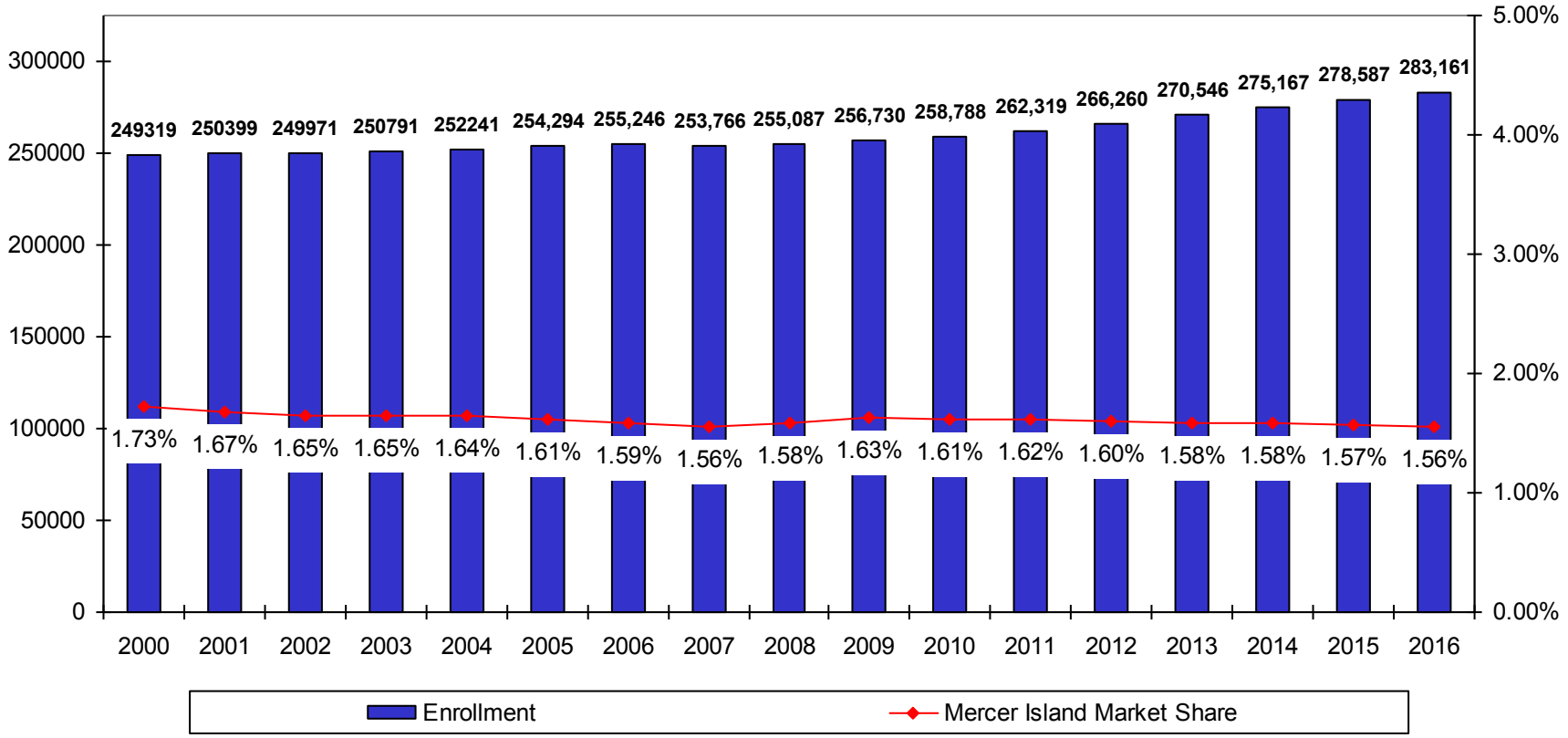
March 2017

District Enrollment Trend

P223 Enrollment (October)
Does Not Include Full-Time Running Start Students
or Students Enrolled in Open Doors



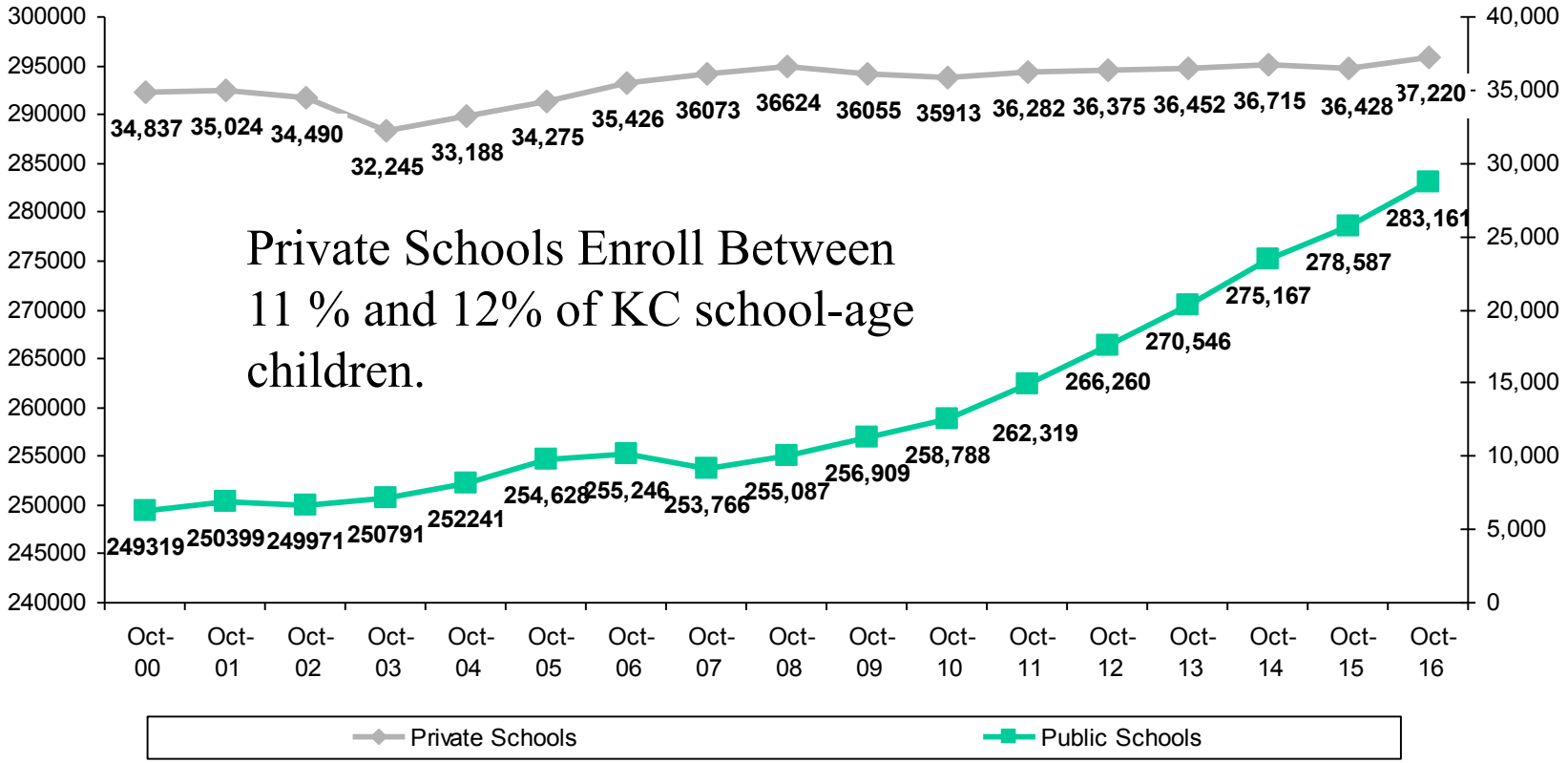
King County Public Schools Enrollment Trend and Mercer Island Market Share



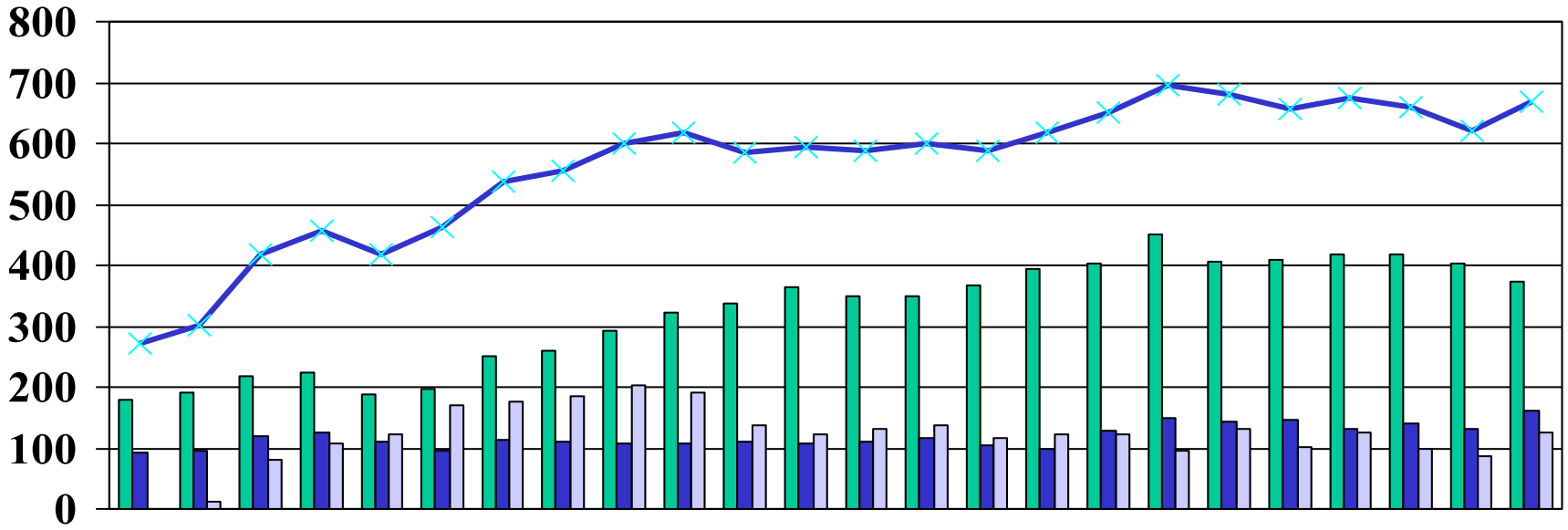
Public and Private School Enrollment King County (K-12 Only)

Source: P223 and P105 Report --State of Washington

Headcount



Enrollment for Private Schools Located in Mercer Island's Service Area

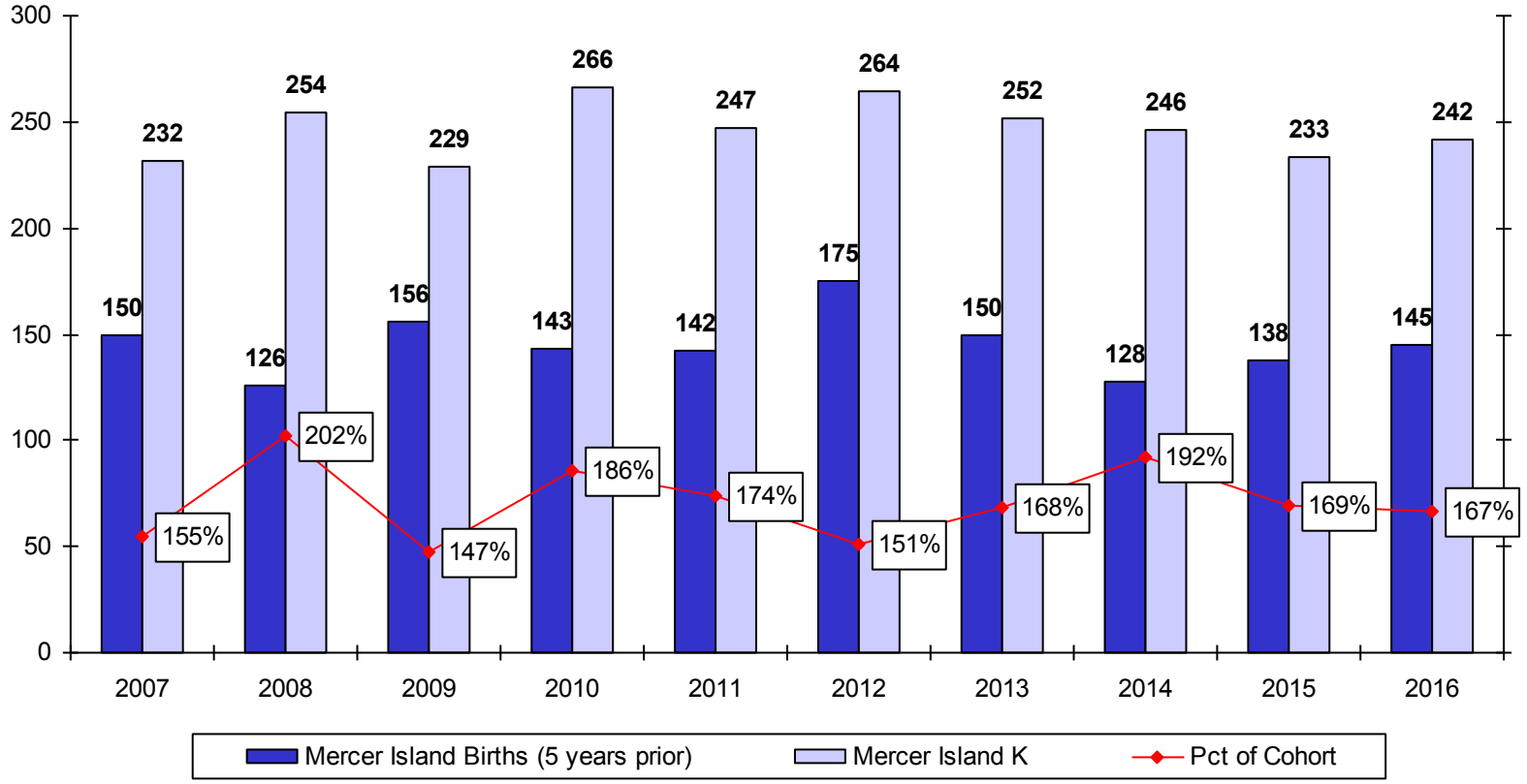


	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015
K-5	179	192	219	223	189	196	250	260	293	321	338	363	350	349	368	395	402	450	406	410	419	419	404	373
6-8	93	97	120	125	109	95	112	111	106	106	110	107	109	115	105	100	127	150	143	146	132	141	130	161
9-12	0	13	80	108	121	171	175	185	202	190	137	123	130	137	115	122	121	95	131	101	125	100	87	125
Total	272	302	419	456	419	462	537	556	601	617	585	593	589	601	588	617	650	695	680	657	676	660	621	669

Enrollment Patterns
Mercer Island School District

Mercer Island

K Enrollment as a Percent of City Births



Average Grade Progression Rates (3, 5, and 10 Year Averages)

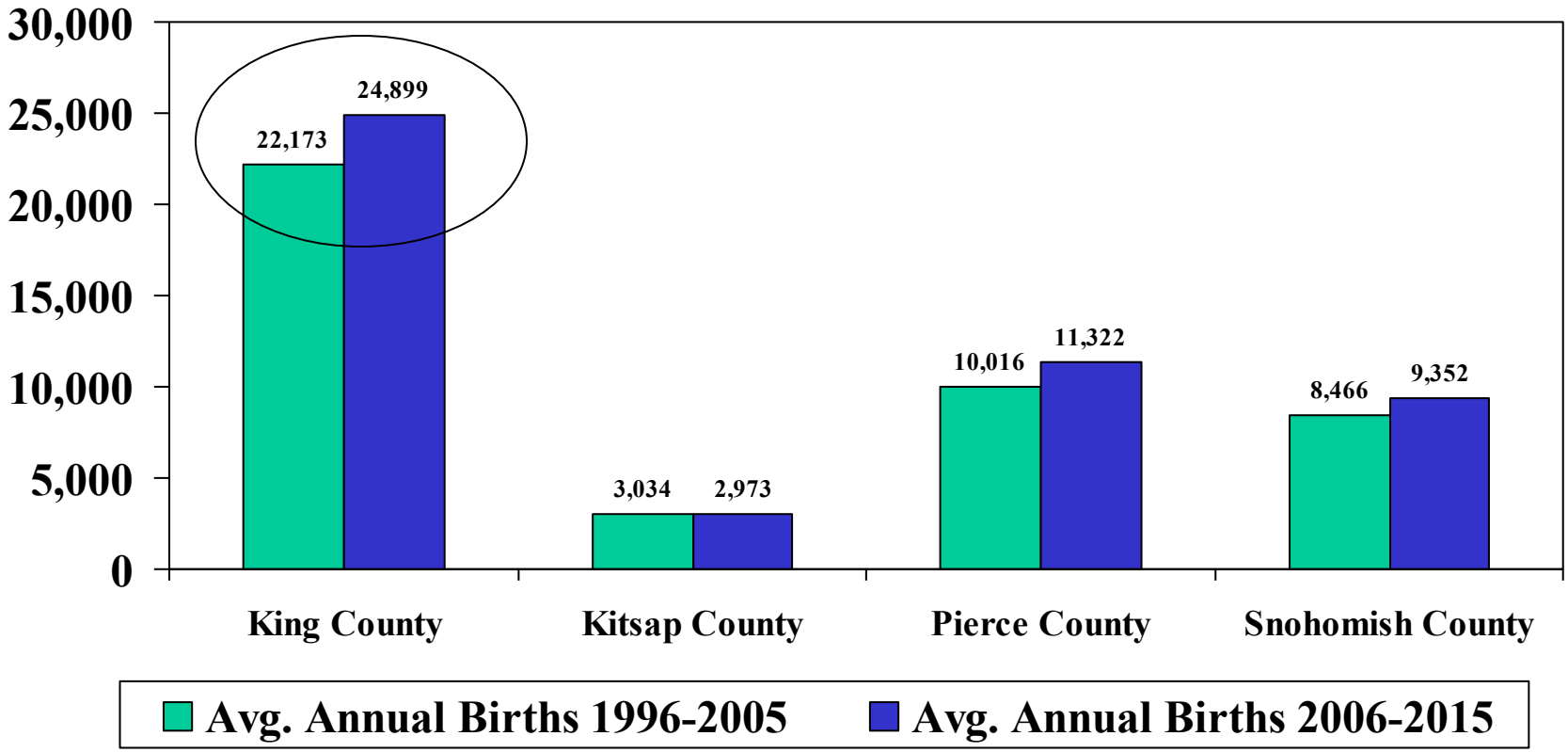
Cohort Ratio Averages for the Mercer Island School District

	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
3 Year	1.109	1.077	1.070	1.041	1.040	1.039	1.045	0.992	1.045	1.022	0.989	0.943
5 Year	1.122	1.072	1.074	1.060	1.034	1.047	1.040	1.000	1.047	1.017	1.000	0.947
10 Year	1.130	1.063	1.066	1.066	1.023	1.037	1.037	1.014	1.043	1.018	1.012	0.972

Demographic Trends

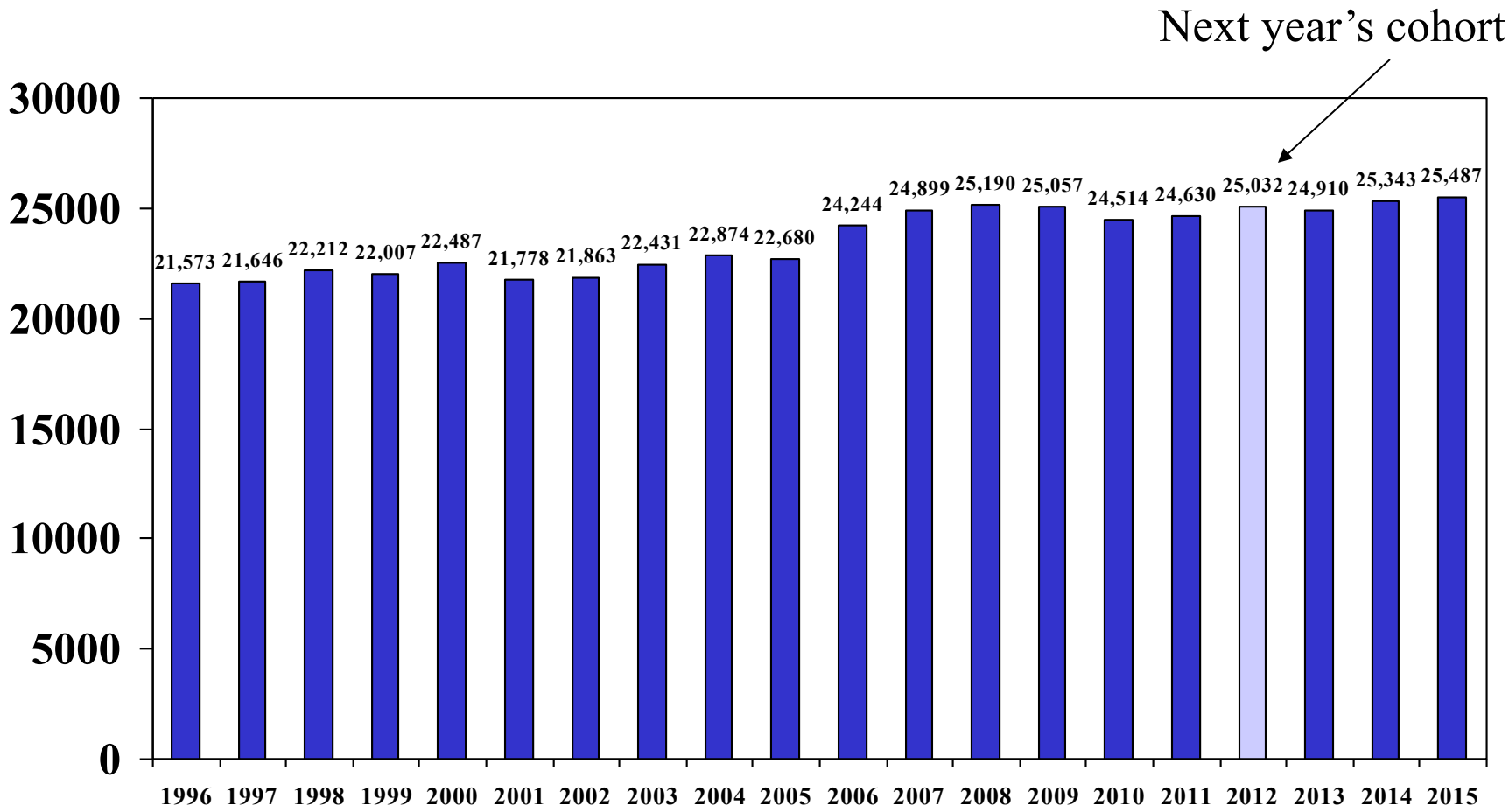
Average Annual Births by County

Source: State of Washington Department of Health Birth Files



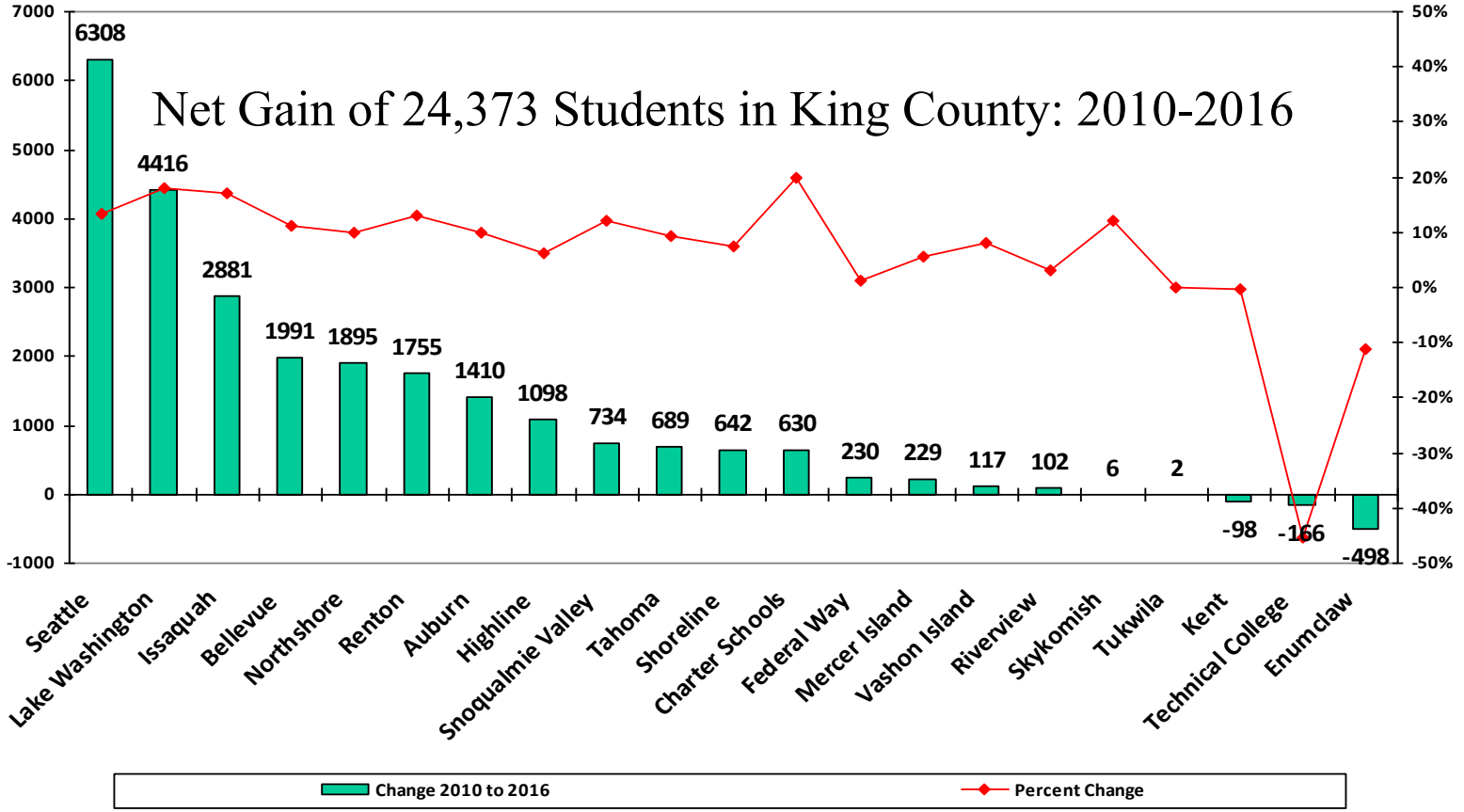
King County Births

Source: Washington State Health Department



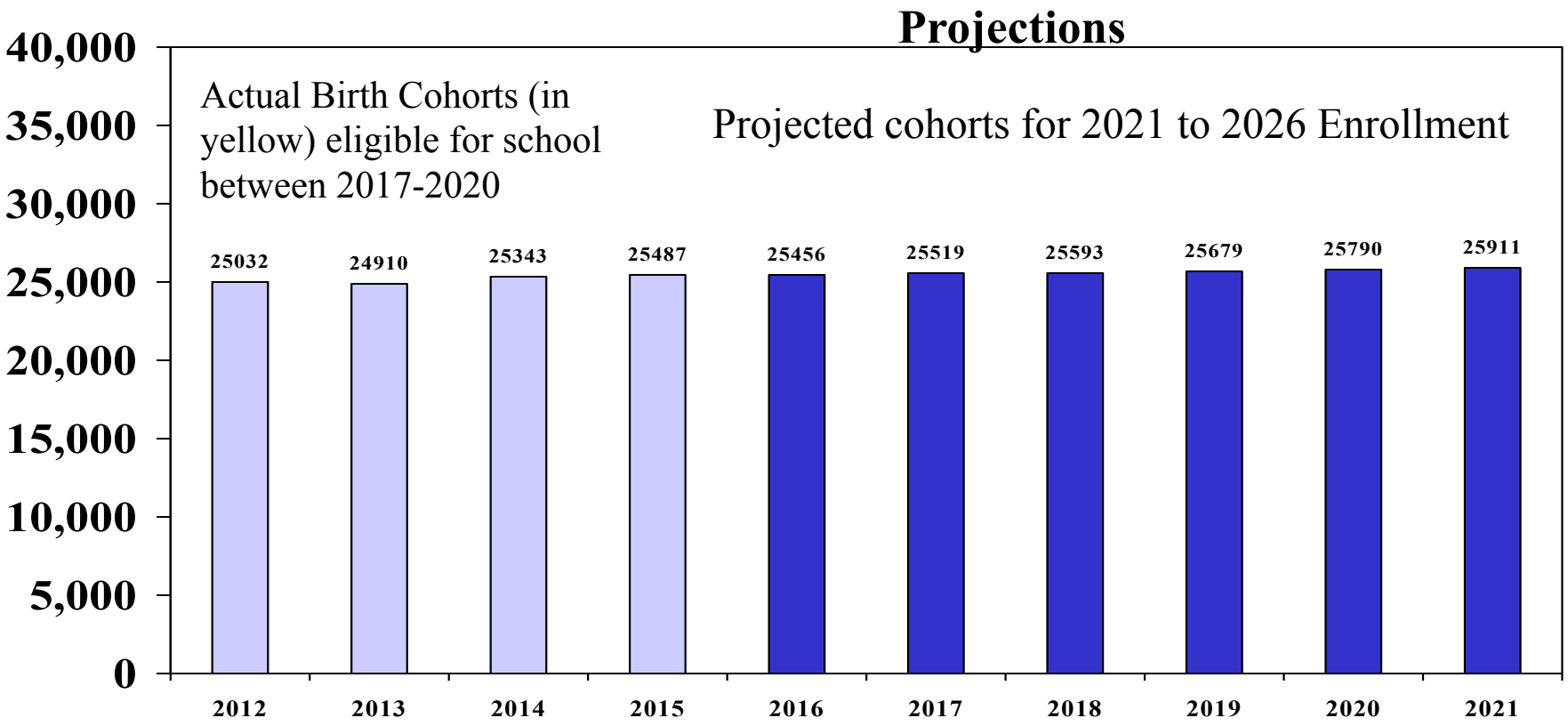
King County School Districts
Change in Enrollment
Oct *2010 to Oct 2016*
LAST SIX YEARS

Numbers may have changed since the original reporting of the data



King County Birth Projections

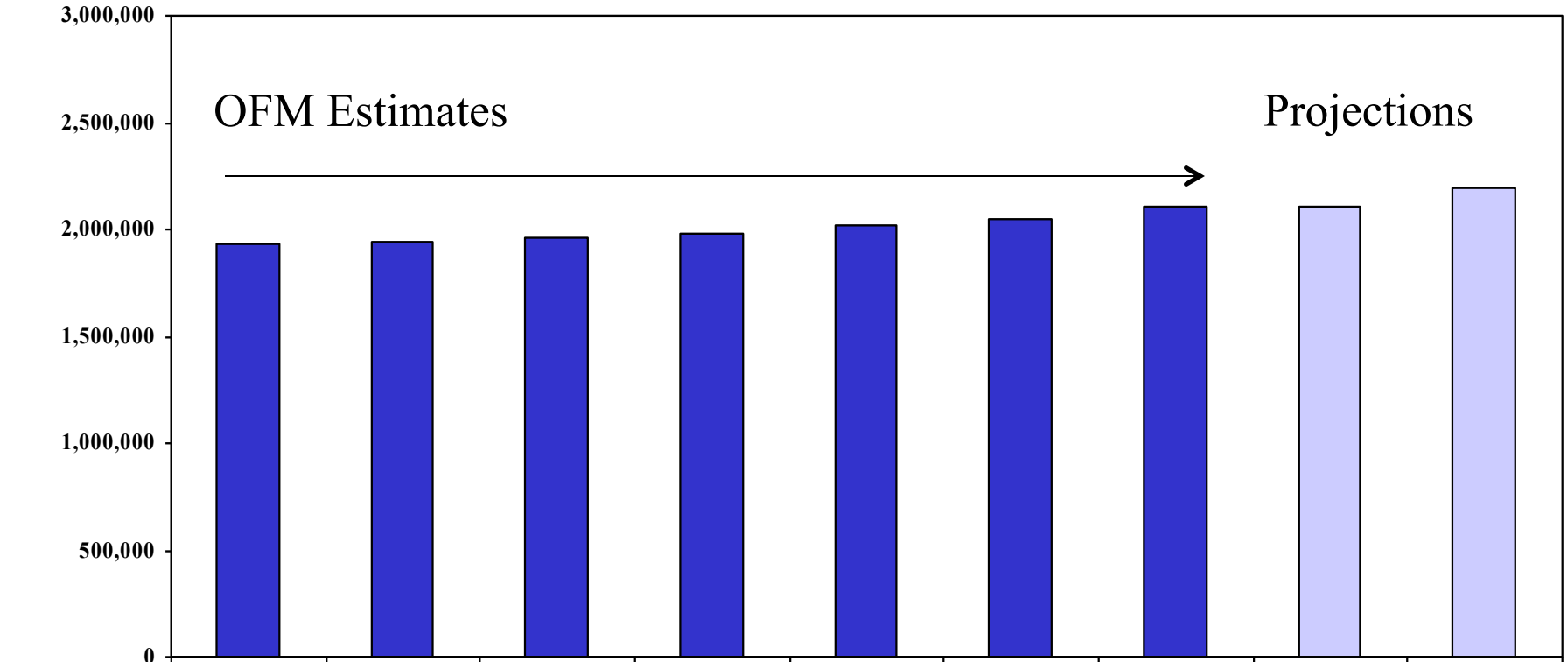
(Based on the Average of 2014 and 2015 Fertility Rates
and Projected Growth in Females in Their Child-Bearing Years
Using the OFM Medium Range Population Forecast)



Population Growth and Projections

King County

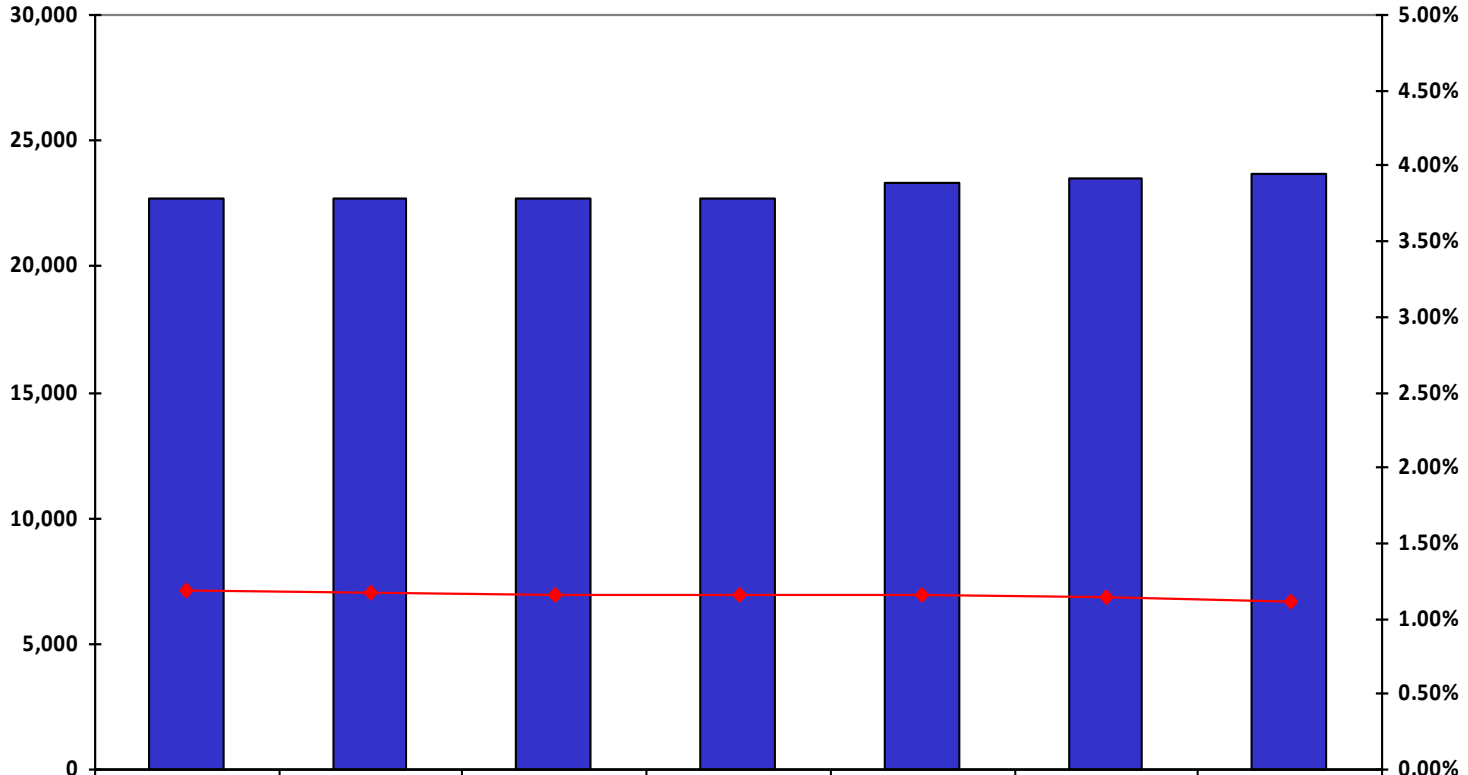
Source: Office of Financial Management of the State of Washington



	Census 2010	2011	2012	2013	2014	2015	2016	2020	2025
King County	1,931,249	1,942,600	1,957,000	1,981,900	2,017,250	2,052,800	2,105,100	2,108,814	2,196,202

Mercer Island Population

Census and State Estimates



	Census 2010	2011	2012	2013	2014	2015	2016
Population	22,699	22,710	22,690	22,720	23,310	23,480	23,660
% of County Population	1.18%	1.17%	1.16%	1.15%	1.16%	1.14%	1.12%

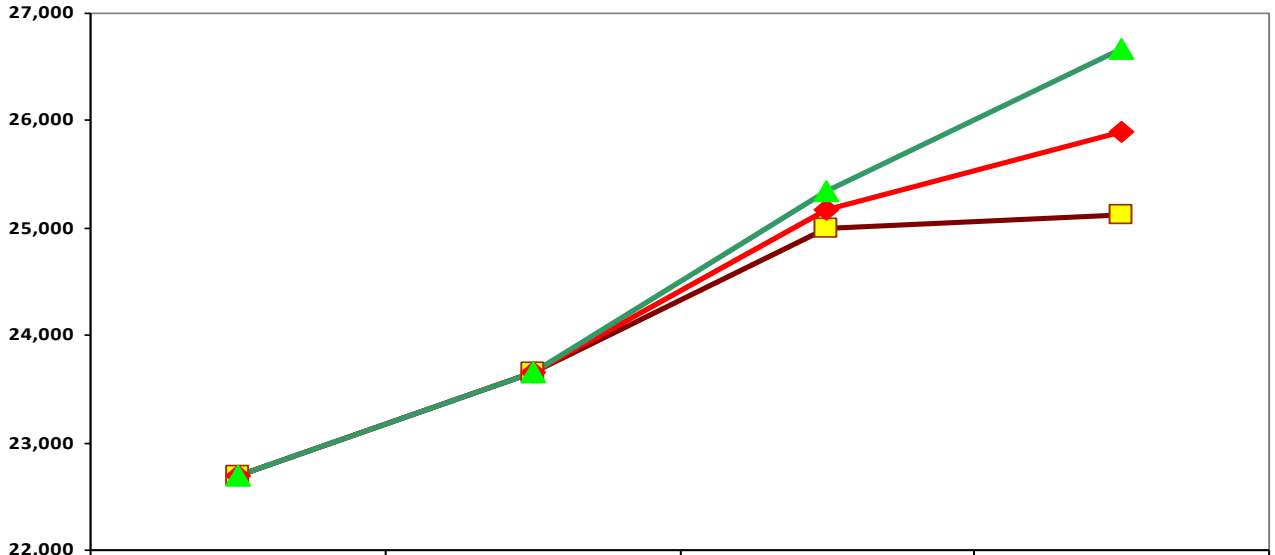
Mercer Island Resident Population Forecasts

Alternative Forecasts Based on Different Assumptions About Growth.

The PSRC Land Use Forecast is Roughly Based on Current Land Use Trends*

The PSRC Land Vision Forecast Assumes Greater Density and More Housing

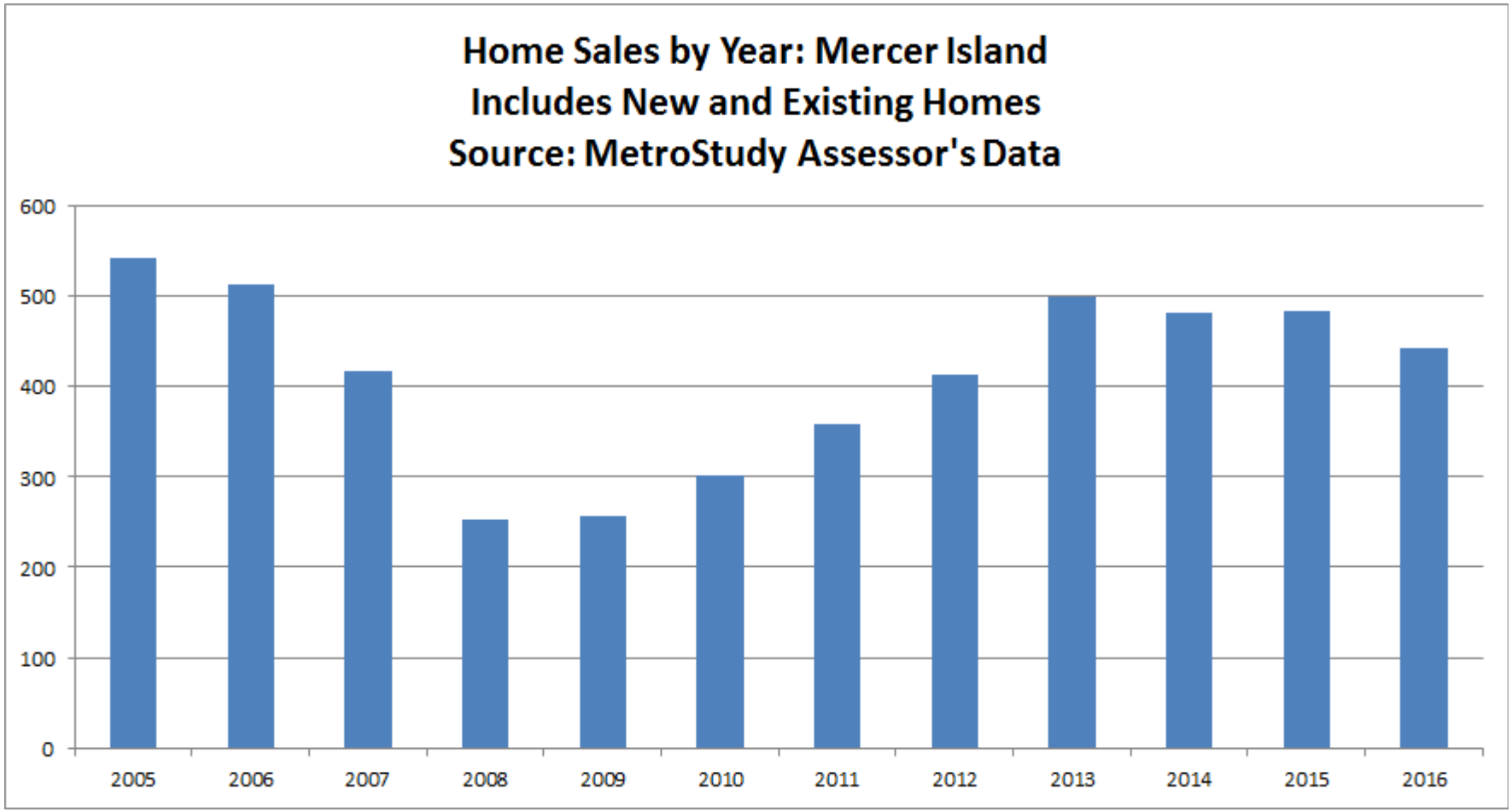
The Medium Range Alternative Lies In-Between the Low and High PSRC Alternatives



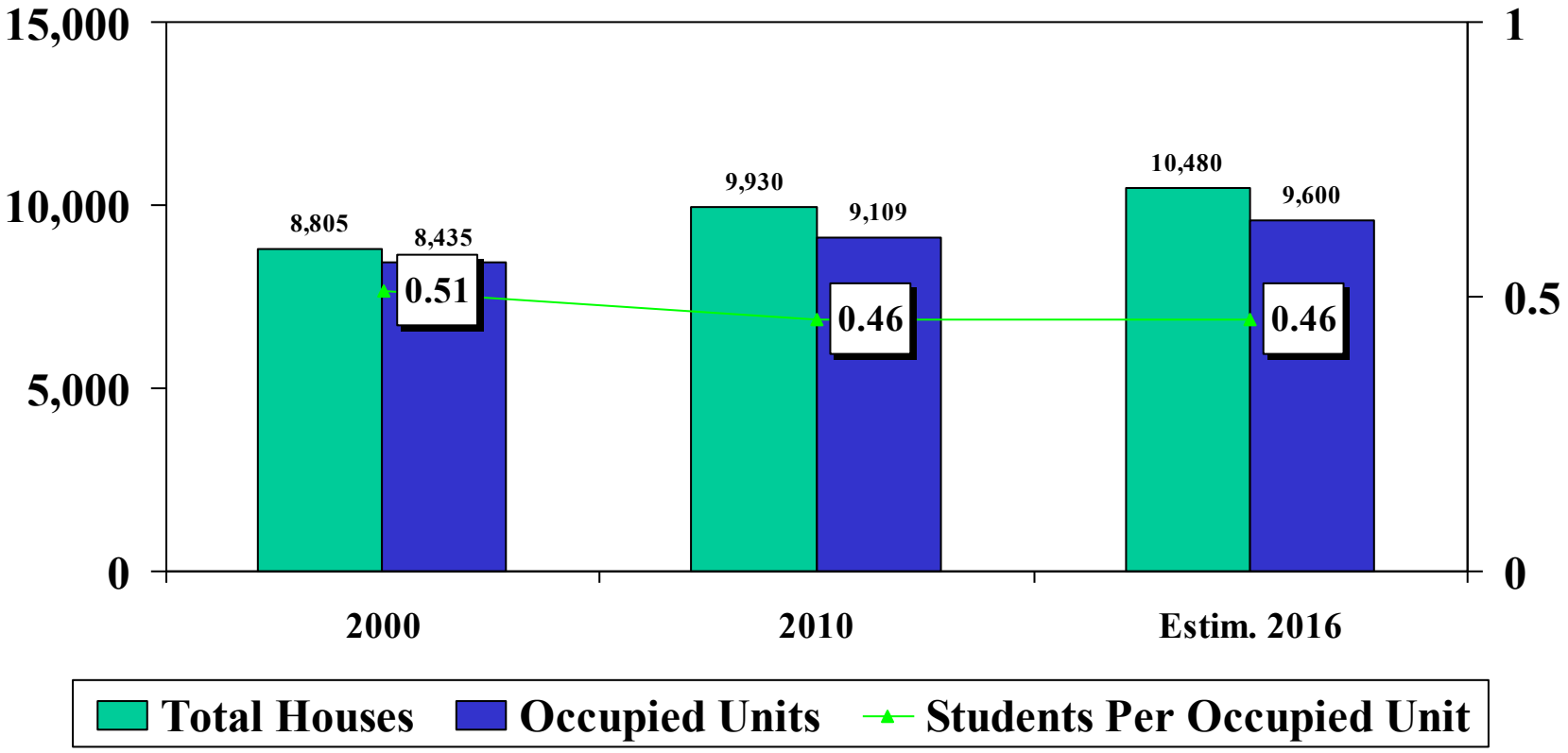
	Census 2010	2016 State Estimate	2020 Forecast	2025 Forecast
Based off of PSRC Land Use Baseline	22,699	23,660	24,991	25,116
Medium Range Alternative	22,699	23,660	25,165	25,893
Based off PSRC Land Vision Forecast	22,699	23,660	25,339	26,669

*The PSRC Land Use Baseline forecast is similar to the Mercer Island City Comprehensive Plan Assumptions.

Single Family and Condo Home Sales Mercer Island

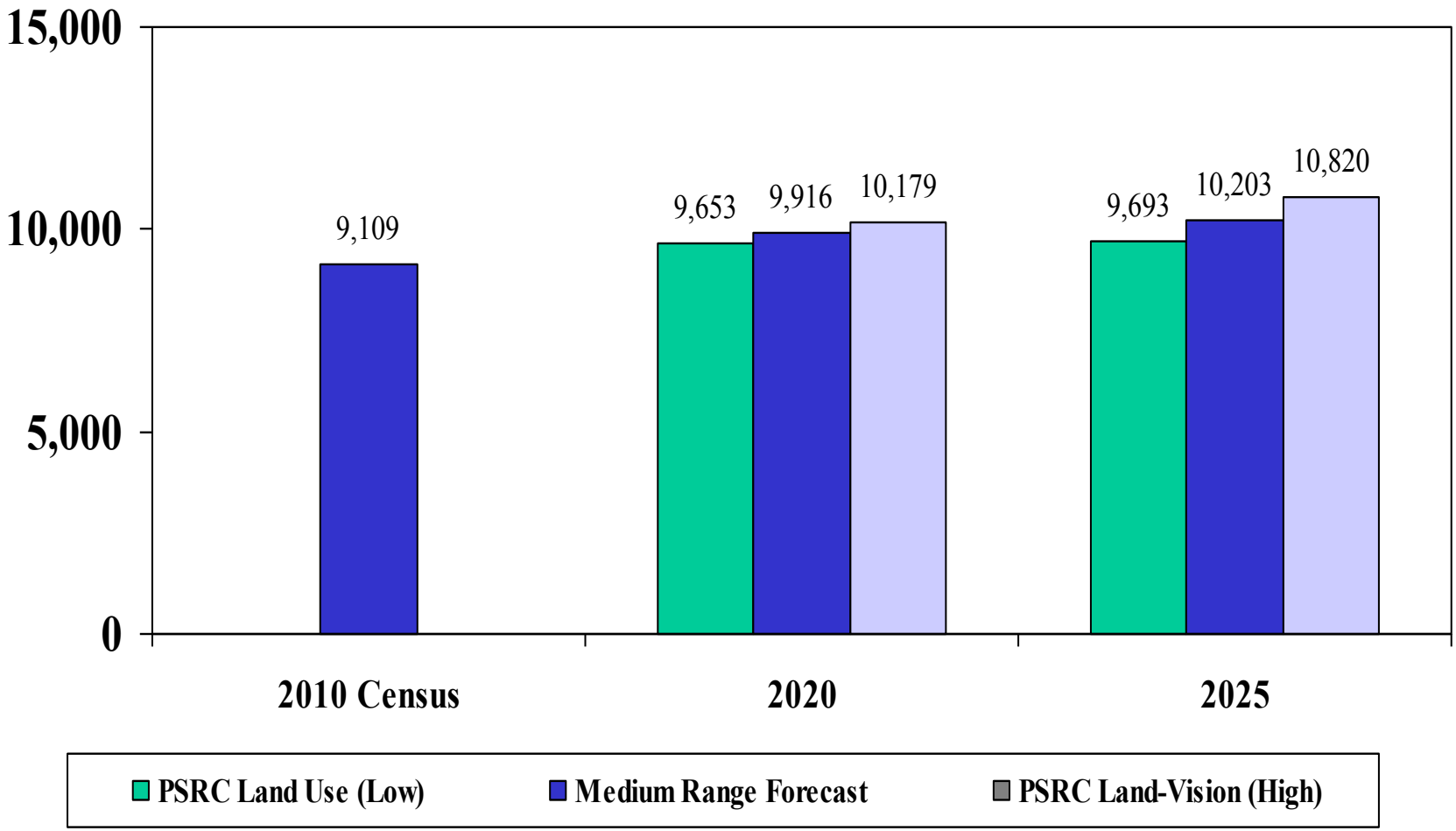


Housing Units in Mercer Island
Total and Occupied
K-12 Public School Students Per House



Future Housing Forecasts
Number of Occupied Units

Based off of PRSC Land Use Baseline and Land Vision Forecasts and a Medium Alternative



K-12 Public School Students Per House (King County Districts)

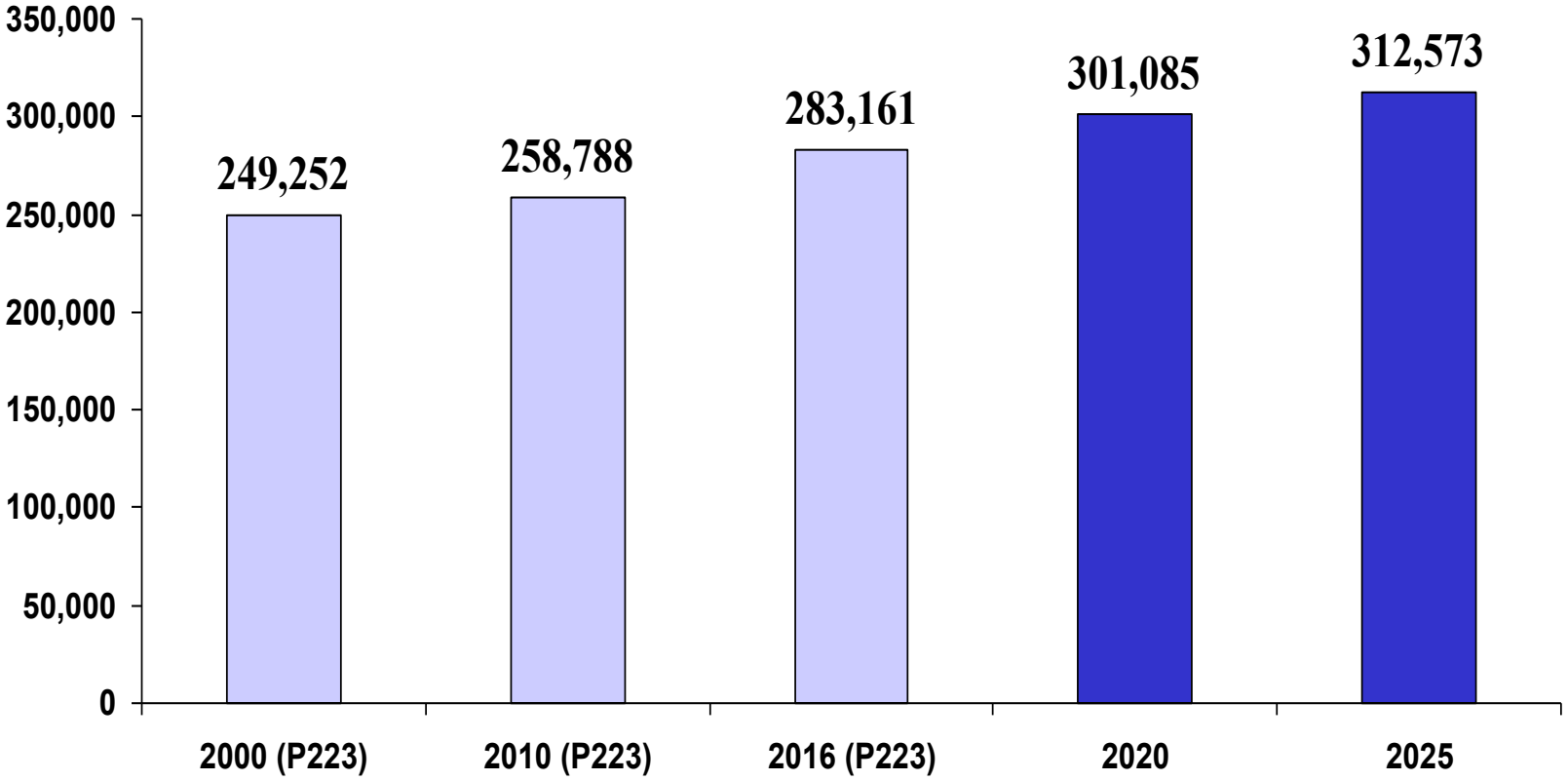
School District	P223 Oct 2010 Enroll	Census 2010 Total Housing Units	Census 2010 Occupied Units	Estimated K-12 Students Per 100 Homes	Estimated K-12 Students Per 100 Occupied
Tahoma	7,394	13,835	13,153	53	56
Snoqualmie Valley	6,019	13,693	12,635	44	48
Auburn	14,343	32,762	30,704	44	47
Kent	26,630	60,010	56,621	44	47
Issaquah	16,881	38,765	36,642	44	46
Federal Way	21,724	50,518	47,551	43	46
Mercer Island	4,177	9,930	9,109	42	46
Enumclaw	4,472	10,516	9,877	43	45
Riverview	3,152	7,470	7,019	42	45
Tukwila	2,908	7,353	6,817	40	43
Northshore	19,390	49,801	46,787	39	41
Highline	18,101	50,913	47,160	36	38
Bellevue	18,008	56,376	50,892	32	35
Lake Washington	24,592	76,389	71,711	32	34
Shoreline	8,808	28,028	26,561	31	33
Vashon Island	1,421	5,552	4,606	26	31
Renton	13,558	48,991	45,526	28	30
Seattle	46,794	308,858	283,793	15	16
Skykomish	49	823	330	6	15

**Note: The number of K-12 students per house is estimated using Census housing counts and the October 2010 P223 enrollment.*

Enrollment Projections

Forecast of the King County K-12 Population

Using Cohort Survival, Actual Births, Birth Forecasts and Projected Changes in Population Growth During Certain Time Periods



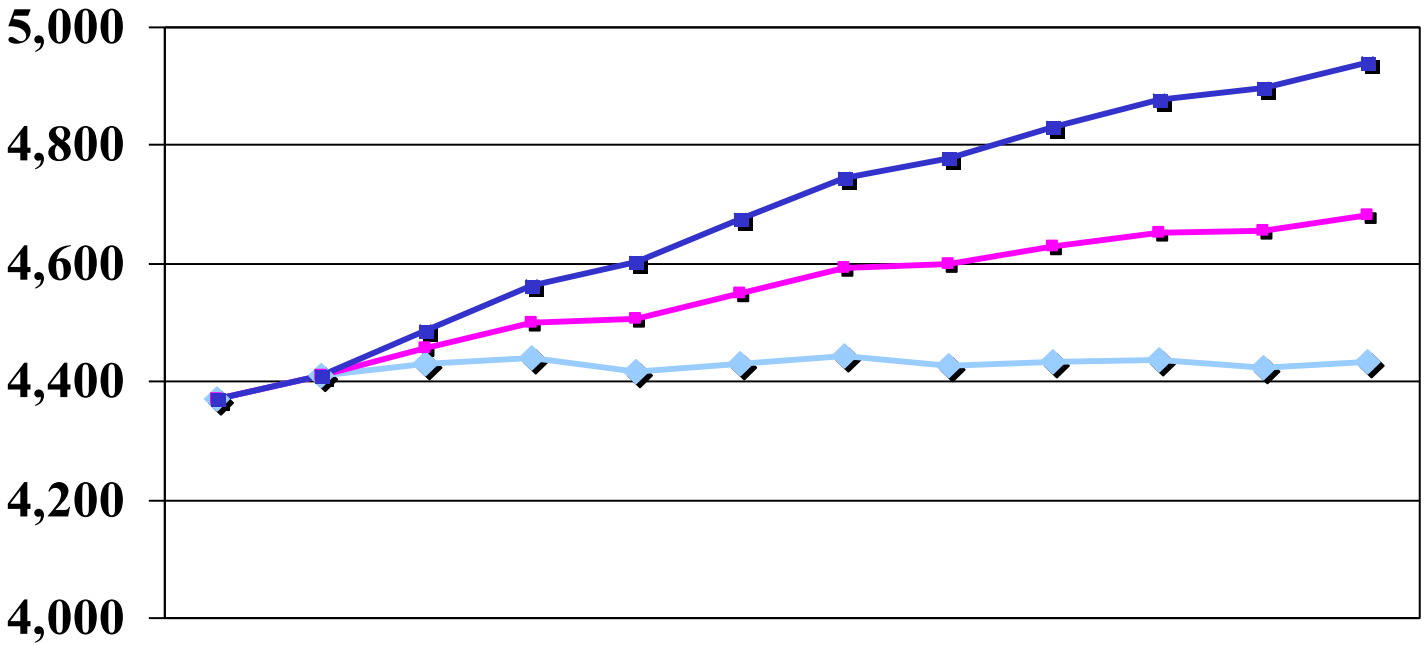
Forecast Estimates Using a Variety of Methods

Cohort Forecasts*	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
3 Year Avg. Cohort	4,409	4,452	4,473	4,456	4,471	4,474	4,447	4,439	4,432	4,403	4,399
5 Year Avg. Cohort	4,409	4,475	4,518	4,519	4,557	4,581	4,572	4,586	4,597	4,588	4,598
10 Year Avg. Cohort	4,409	4,494	4,548	4,554	4,599	4,634	4,628	4,647	4,669	4,675	4,696
Linear Models (Based on Total Enrollment Only -- 10 Year History)											
County Births and MI Pop (Low)	4,409	4,470	4,509	4,565	4,647	4,649	4,657	4,666	4,676	4,688	4,701
County Births and MI Pop (High)	4,409	4,483	4,521	4,578	4,697	4,733	4,776	4,819	4,864	4,910	4,957
Students Per House Forecast (Based on Alternative Pop/Housing Forecasts											
Student Per House Low Growth	4,409	4,416	4,422	4,428	4,433	4,437	4,441	4,444	4,448	4,452	4,455
Student Per House Medium Growth	**4,409**	**4,447**	**4,484**	**4,522**	**4,559**	**4,586**	**4,612**	**4,638**	**4,665**	**4,691**	**4,718**
Student Per House High Growth	4,409	4,477	4,545	4,612	4,680	4,729	4,778	4,828	4,877	4,926	4,975
Average of all Forecasts	**4,464**	**4,503**	**4,529**	**4,580**	**4,603**	**4,614**	**4,633**	**4,653**	**4,667**	**4,687**	

**Kindergarten enrollment in the cohort forecasts is based on the District's average share of the County birth cohort (K enrollment compared to births) for the past three, six, and ten years, multiplied by actual and projected birth cohorts expected to enroll between 2017 and 2026*

Mercer Island District Forecast
Alternative Forecasts 2017-2026

Based on Grade Level Trends and Alternative Projections of Population and Housing



	Oct-15	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	Oct-26
Low	4,371	4,409	4,429	4440	4417	4430	4444	4428	4433	4438	4424	4434
Medium (Recommended)	4,371	4,409	4,458	4501	4508	4551	4592	4600	4628	4653	4656	4681
High Range Forecast	4,371	4,409	4,487	4563	4601	4674	4744	4778	4830	4878	4899	4941

Mercer Island (October Headcount Enrollment)

Births	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Mercer Island Births	140	130	167	136	121	155	132	150	126	156	143	142	175	150	128	138	145
King County Births	21817	21573	21646	22212	22007	22487	21778	21863	22,431	22874	22680	24244	24,899	25190	25057	24514	24,630
K Enroll as % of Cnty	1.20%	1.11%	1.05%	1.05%	0.95%	1.11%	1.14%	1.06%	1.13%	1.00%	1.17%	1.02%	1.06%	1.00%	0.98%	0.95%	0.98%
K Enroll as a % of City	186%	184%	136%	171%	172%	161%	188%	155%	202%	147%	186%	174%	151%	168%	192%	169%	167%
City % of County Cohort	0.64%	0.60%	0.77%	0.61%	0.55%	0.69%	0.61%	0.69%	0.56%	0.68%	0.63%	0.59%	0.70%	0.60%	0.51%	0.56%	0.59%

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
K	261	239	227	233	208	250	248	232	254	229	266	247	264	252	246	233	242
1	259	276	257	257	260	224	283	276	267	283	280	294	277	298	287	273	256
2	306	277	291	276	259	274	227	294	294	280	304	294	311	297	317	305	298
3	330	309	276	308	282	266	290	255	306	311	305	305	310	336	317	343	324
4	314	330	309	297	330	292	275	311	281	316	339	320	331	337	361	326	356
5	360	318	332	331	301	345	306	279	320	280	328	341	322	339	358	356	348
6	362	356	316	349	341	301	353	298	282	347	282	343	362	338	360	378	363
7	350	364	368	325	359	339	304	369	304	290	346	311	348	370	358	369	398
8	349	352	369	381	340	352	343	308	365	314	305	357	320	350	374	356	363
9	343	347	354	351	392	344	343	334	336	383	320	337	362	332	364	398	368
10	350	335	343	360	355	387	346	337	341	350	393	335	339	364	333	368	412
11	340	334	343	333	364	363	379	342	348	357	358	407	336	342	364	332	361
12	377	343	348	339	340	366	351	369	360	343	351	352	388	329	319	334	320
Tot	**4,301**	**4,180**	**4,133**	**4,140**	**4,131**	**4,103**	**4,048**	**4,004**	**4,058**	**4,083**	**4,177**	**4,243**	**4,270**	**4,284**	**4,358**	**4,371**	**4,409**
Grow th	93	-121	-47	7	-9	-28	-55	-44	54	25	94	66	27	14	74	13	38
Percent	2.2%	-2.8%	-1.1%	0.2%	-0.2%	-0.7%	-1.3%	-1.1%	1.3%	0.6%	2.3%	1.6%	0.6%	0.3%	1.7%	0.3%	0.9%
	1830	1749	1692	1702	1640	1651	1629	1647	1722	1699	1822	1801	1815	1859	1886	1836	1824
	1061	1072	1053	1055	1040	992	1000	975	951	951	933	1011	1030	1058	1092	1103	1124
	1410	1359	1388	1383	1451	1460	1419	1382	1385	1433	1422	1431	1425	1367	1380	1432	1461
King County Public Schools K-12	249,319	250,104	249,971	250,791	252,241	254,294	255,246	253,121	254,398	256,545	259,144	261,939	266,260	270,546	275,167	278,587	283,161
Mercer Island Market Share	1.73%	1.67%	1.65%	1.65%	1.64%	1.61%	1.59%	1.58%	1.60%	1.59%	1.61%	1.62%	1.60%	1.58%	1.58%	1.57%	1.56%

Low Range Forecast (Growth Rates Based off of the Low Range Pop/Housing Forecast)

6 year Trends at Kindergarten	Median	SD+1	SD-1
% County	1.00%	1.04%	0.96%
% City	170%	183%	157%
City % of County	0.62%	0.69%	0.56%

Projected Births

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
City Births	148	156	179	163	153	153	154	154	155	155
Cnty Births	25,032	24,910	25,348	25,487	25,456	25,519	25,593	25,679	25,790	25,911
% County	0.98%	1.01%	1.01%	1.02%	0.99%	0.99%	0.99%	0.99%	0.99%	0.99%
% City	154%	154%	154%	153%	153%	152%	152%	151%	151%	150%

Rollup Ratio Used	*Adjusted for Future Pop/Housing Growth* 2017	2018-20	2021-26	Priv. Schls
0.97%	0.975	0.980	0.983	0.999
1.109	0.994	0.996	1.000	0.999
1.077	0.994	0.996	1.000	0.999
1.070	0.994	0.996	1.000	0.999
1.041	0.994	0.996	1.000	0.999
1.040	0.994	0.996	1.000	0.999
1.039	0.994	0.996	1.000	0.999
1.045	0.994	0.996	1.000	0.999
0.992	0.994	0.996	1.000	0.999
1.045	0.994	0.996	1.000	0.999
1.022	0.994	0.996	1.000	0.999
0.989	0.994	0.996	1.000	0.999
0.943	0.994	0.996	1.000	0.999

Projections

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
K	245	252	257	261	253	253	254	255	256	257
1	267	270	278	284	289	280	281	282	282	284
2	274	286	289	298	305	311	301	302	303	304
3	317	292	304	308	319	326	332	322	323	324
4	335	328	302	315	320	331	339	345	335	336
5	368	347	339	313	327	333	344	352	359	348
6	359	380	358	351	324	340	345	357	365	372
7	377	373	395	372	366	338	354	360	372	381
8	392	372	369	390	369	363	335	351	357	369
9	377	408	387	383	407	385	379	350	367	373
10	374	383	415	393	391	416	393	386	357	374
11	405	368	377	408	389	387	411	389	382	353
12	338	380	345	354	385	366	364	387	366	360
Tot	**4,429**	**4440**	**4417**	**4430**	**4444**	**4428**	**4433**	**4438**	**4424**	**4434**
Change	20	11	-23	14	14	-15	5	5	-14	10
Percent	0.4%	0.3%	-0.5%	0.3%	0.3%	-0.3%	0.1%	0.1%	-0.3%	0.2%
K-5	1806	1775	1770	1778	1813	1834	1851	1858	1858	1852
6-8	1129	1126	1122	1113	1059	1041	1035	1068	1095	1122
9-12	1494	1540	1524	1539	1572	1554	1547	1512	1472	1460

Projection King County K-12

KC K-12	287,385	291,392	296,628	301,085	304,522	307,537	310,160	311,900	312,573	312,981
Market share	1.54%	1.52%	1.49%	1.47%	1.46%	1.44%	1.43%	1.42%	1.42%	1.42%

Medium Range Forecast (Growth Rates Based off of the Medium Range Pop/Housing Forecast)

6 year Trends at Kindergarten	Median	SD+1	SD-1
% County	1.00%	1.04%	0.96%
% City	170%	183%	157%
City % of County	0.62%	0.69%	0.56%

Projected Births

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
City Births	148	156	179	163	153	153	154	154	155	155
Cnty Births	25,032	24,910	25,348	25,487	25,456	25,519	25,593	25,679	25,790	25,911
% County	0.99%	1.03%	1.03%	1.04%	1.01%	1.01%	1.01%	1.01%	1.01%	1.01%
% City	154%	154%	154%	153%	153%	152%	152%	151%	151%	150%

Rollup Ratio Used	*Adjusted for Future Pop/Housing Growth* 2017	2018-20	2021-26	Priv. Schls
0.97%	0.990	0.995	0.998	1.000
1.109	1.000	1.002	1.006	1.000
1.077	1.000	1.002	1.006	1.000
1.070	1.000	1.002	1.006	1.000
1.041	1.000	1.002	1.006	1.000
1.040	1.000	1.002	1.006	1.000
1.039	1.000	1.002	1.006	1.000
1.045	1.000	1.002	1.006	1.000
0.992	1.000	1.002	1.006	1.000
1.045	1.000	1.002	1.006	1.000
1.022	1.000	1.002	1.006	1.000
0.989	1.000	1.002	1.006	1.000
0.943	1.000	1.002	1.006	1.000

Projections

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
K	248	256	261	265	257	257	258	259	260	261
1	268	276	284	290	295	286	287	288	289	290
2	276	290	298	307	314	320	310	311	312	313
3	319	296	311	319	330	338	344	334	335	336
4	337	332	308	324	334	346	354	361	350	350
5	370	351	346	321	339	350	362	370	377	366
6	361	385	366	360	336	354	366	378	387	394
7	379	378	403	383	379	353	372	384	397	407
8	395	377	376	401	382	378	352	371	383	396
9	379	413	395	394	421	401	397	370	390	403
10	376	388	423	404	405	433	413	408	380	401
11	408	373	385	420	402	403	431	411	406	378
12	341	385	352	364	398	382	382	409	390	386
Tot	**4,458**	**4501**	**4508**	**4551**	**4592**	**4600**	**4628**	**4653**	**4656**	**4681**
Change	49	43	7	43	41	9	27	26	2	25
Percent	1.1%	1.0%	0.2%	0.9%	0.9%	0.2%	0.6%	0.6%	0.1%	0.5%
K-5	1819	1801	1808	1826	1869	1897	1915	1922	1922	1916
6-8	1135	1140	1145	1144	1096	1085	1089	1133	1167	1197
9-12	1503	1560	1555	1581	1626	1619	1623	1598	1566	1568

Projection King County K-12

KC K-12	287,385	291,392	296,628	301,085	304,522	307,537	310,160	311,900	312,573	312,981
Market share	1.55%	1.54%	1.52%	1.51%	1.51%	1.50%	1.49%	1.49%	1.49%	1.50%

High Range Forecast (Growth Rates Based off of the High Range Pop/Housing Forecast)

6 year Trends at Kindergarten	Median	SD+1	SD-1
% County	1.00%	1.04%	0.96%
% City	170%	183%	157%
City % of County	0.62%	0.69%	0.56%

Projected Births

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
City Births	148	156	179	163	153	153	154	154	155	155
Cnty Births	25,032	24,910	25,348	25,487	25,456	25,519	25,593	25,679	25,790	25,911
% County	1.01%	1.04%	1.04%	1.05%	1.02%	1.02%	1.02%	1.02%	1.02%	1.02%
% City	154%	154%	154%	153%	153%	152%	152%	151%	151%	150%

Rollup Ratio Used	*Adjusted for Future Pop/Housing Growth* 2017	2018-20	2021-26	Priv. Schls
0.97%	1.005	1.010	1.013	1.001
1.109	1.006	1.008	1.012	1.001
1.077	1.006	1.008	1.012	1.001
1.070	1.006	1.008	1.012	1.001
1.041	1.006	1.008	1.012	1.001
1.040	1.006	1.008	1.012	1.001
1.039	1.006	1.008	1.012	1.001
1.045	1.006	1.008	1.012	1.001
0.992	1.006	1.008	1.012	1.001
1.045	1.006	1.008	1.012	1.001
1.022	1.006	1.008	1.012	1.001
0.989	1.006	1.008	1.012	1.001
0.943	1.006	1.008	1.012	1.001

Projections

	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
K	252	260	265	269	260	261	262	263	264	265
1	270	282	291	296	302	293	293	294	295	296
2	277	294	307	316	323	329	319	320	321	322
3	321	299	317	331	342	350	357	346	347	348
4	339	337	315	333	349	361	370	376	365	366
5	372	356	353	330	350	368	380	389	396	384
6	364	390	373	370	347	369	387	400	409	417
7	381	383	411	393	392	367	390	409	423	433
8	397	382	384	412	395	394	369	392	411	425
9	382	419	403	404	436	418	417	391	415	435
10	378	393	432	415	419	451	433	431	404	430
11	410	378	393	431	416	420	452	434	432	405
12	343	390	359	374	412	397	401	432	415	413
Tot	**4,487**	**4563**	**4601**	**4674**	**4744**	**4778**	**4830**	**4878**	**4899**	**4941**
Change	78	76	38	73	70	35	52	48	21	42
Percent	1.8%	1.7%	0.8%	1.6%	1.5%	0.7%	1.1%	1.0%	0.4%	0.9%
K-5	1832	1827	1847	1874	1927	1962	1981	1988	1988	1982
6-8	1142	1155	1168	1175	1134	1130	1146	1201	1244	1276
9-12	1513	1580	1586	1624	1682	1686	1703	1688	1666	1684

Projection King County K-12

KC K-12	287,385	291,392	296,628	301,085	304,522	307,537	310,160	311,900	312,573	312,981
Market share	1.56%	1.57%	1.55%	1.55%	1.56%	1.55%	1.56%	1.56%	1.57%	1.58%

Consultant Background and Experience

Dr. Kendrick was the demographer for the Seattle Public schools from 1990 to 1997. In that capacity he provided enrollment projections to facilitate staffing and facilities planning and helped with the management of the student assignment system He also provided analysis of the relationship between demographics and test scores.

Since 1997 he has worked as a consultant providing demographic analysis and enrollment projections for local school districts. Over the past 20 years his clients have included the following Districts: Auburn, Bainbridge Island, Bellingham, Bellevue, Bethel, Bremerton, Central Kitsap, Edmonds, Enumclaw, Federal Way, Marysville, Mercer Island, Monroe, North Kitsap, Olympia, Renton, Seattle, South Kitsap, Shoreline, Snoqualmie Valley, Sumner, and Tukwila. He also does annual enrollment projection work for the Everett, Highline, Mukilteo, Northshore, Puyallup, and Tacoma School Districts. He has worked in all four counties of the Puget Sound and is familiar with the different trends and patterns across the region.

Mercer Island School District

Demographic Trends and Enrollment Projections

Prepared by

William L. (“Les”) Kendrick Ph.D.
Educational Data Solutions, LLC
P.O. Box 9693
Seattle, WA 98109

Educational Data Solutions, LLC
March 2017

Notes and Considerations

A wide variety of data sources were considered in developing this study. In addition, community input was passed along to the present author by the Superintendent. Many of the observations and comments were quite valuable and where possible the information was incorporated into the analysis, or provided in an appendix as contextual information that might be of some relevance to future planning.

We reached out to the Mercer Island preschool association about data that might be used for predicting kindergarten. Although we have not received any information at this time, it is possible that some analysis could be done in the future that looks at the relationship between preschool enrollment and kindergarten. As I noted at the February 9, 2017 board meeting my own experience suggests that the data might be useful for the first year or two of a forecast. Births are generally a better predictor overall and the best predictor for longer range forecasts (ten years).

The main population and housing data from this study comes from New Home Trends, the City of Mercer Island and the Puget Sound Regional Council. It should be noted that the city provides certain data (e.g., permit counts) to the PSRC to be used in their tabulations. It should also be noted that the City cites and uses the PSRC's population forecast in its Comprehensive Plan.

Notes and Considerations

Some board members and several community members have suggested that the number of K-12 students per household will increase in the coming years for various reasons (light rail development, extended turnover of existing homes, and even an increase in students from private schools). We have used the Census 2010 estimate of the number of students per home in our analysis and have assumed it will remain relatively consistent over time. Our rationale is that we do not have an adequate means for predicting increased turnover at this time, nor can we assume it will result in greater student growth from these homes. Several matters are worth noting in this regard.

- Home sales data from the past decade shows the decline and recovery in the housing market but about the same number of home sales in a given year in the past few years that we saw prior to the housing bubble. Currently we are not seeing any marked increase in the turnover of homes.

- Assessor's data is available showing homes sales on the Island. It is possible to do some future analysis comparing current student addresses to homes sales in order to determine the net gain or loss of students from the turnover of existing homes.

- Retirements of baby boomers is likely to increase between 2020 and 2030 and this is a time where we might expect more extensive housing turnover. This fact, and the availability of Census data in 2021 suggests that this kind of analysis would be most useful during that time frame.

Finally, I would like to add a special note of thanks to the City of Mercer Island Permit Supervisor, Linda Pineau, who provided information on permits and helpful contextual information about housing development in the City.

Introduction

Mercer Island and the Region

The present report provides an update of the enrollment forecasts completed for the Mercer Island School District in November 2012. Enrollment in Mercer Island in 2016 is currently tracking very close to that earlier forecast (9 students higher as of October). Elementary enrollment in October 2016 was six students below the projected number from the 2012 forecast. Middle school enrollment in October 2016 was 28 students above the projection, and high school enrollment was 14 students less than the projected total.

It is not surprising, of course, that Mercer Island's K-12 population has been growing over the past four years. Enrollment in King County generally has increased by over 24,000 students since October 2010. This growth has been driven by the larger birth cohorts that started entering the schools in October 2011 and by the large population gains in Seattle and the region in recent years due to a strong economy. Over the past three years these trends have extended beyond King County with stronger population and economic gains reaching both Pierce and Snohomish County. These demographic trends have led to increasing K-12 enrollment gains throughout the Puget Sound region. So what does the future look like?

In the 2012 report we noted that during the years of the housing slump (2007 to 2011) many families opted to live closer to urban job areas spurring population and K-12 growth in places like Seattle, Kirkland, Bellevue, Renton and Everett, as well as places that were close to urban job centers like Issaquah, Mercer Island and Highline. These trends have started to change.

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We are still seeing population and K-12 gains in these urban areas, but over the past three years growth has once again spread out to some of the outlying regions of the Puget Sound. These include areas in Pierce County, and in this past year even the outlying reaches of Snohomish County like the Stanwood-Camano area.

So what do trends like this mean for Mercer Island? Families who are looking for places in Pierce County or Snohomish County, after all, are very unlikely to be the same as families that look for a residence on Mercer Island. In general, housing and cost of living in Seattle and surrounding King County is more expensive than other areas. As a result many families move to outlying regions where housing is more affordable. Yet it should also be noted that Mercer Island and other cities have, in recent years, made efforts to provide more affordable housing options, like some of the Town Center developments. Trends like this are likely to continue into the future and the recent comprehensive plan from the City of Mercer Island confirms this point of view.

In general, that plan calls for preservation of the Island's single family housing culture, but with an increase in density and more affordable housing in the Town Center and other areas that are close to present and future transportation opportunities. The extension of light rail service to the Island between 2020 and 2025 could in fact be one opportunity to design and build affordable housing in an ideal location near commuter train lines.

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What we do not know, is whether this kind of development will attract families with children who have many other options in the region. Even within King County, Mercer Island is one of many locations that existing and new residents might choose. Yet it should also be noted that Mercer Island has a relatively large number of K-12 public school students per household compared to many other Districts in King County. Assuming this ratio remains at its current level, even a minimal amount of new housing will continue to insure some growth in the District's K-12 population over time. We do, however, need to provide some context for the potential K-12 growth in Mercer Island and the King County generally.

First, it is important to understand the significance of birth trends for K-12 growth. As births cycle up or down, so too does K-12 enrollment. We are currently seeing the results of an upward trend in births that began about a decade ago in King County and the Puget Sound generally. There have been approximately 2,700 more births per year on average over the past decade (2006-2015) than we saw in the previous decade (1996-2005) in King County. This trend is partially the result of a larger number of women entering their child-bearing years (ages 20-35) and to a lesser degree, to the recently strong population gains in Seattle and King County. These larger birth cohorts will continue entering the schools over the next five years and this will continue to fuel growth in the region. Over time, these larger cohorts will roll up through the grades leading to increases in middle school and high school enrollments. For now we are predicting that the birth cohorts in the coming years will be only slightly higher than what we have seen in the past five years, and this has implications for the future.

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Assuming County births remain at a level between 25,000 and 26,000 a year between now and 2021 we would predict that over time their impact on elementary enrollment will be diminished. We will still have large kindergarten and elementary classes, of course, but each year there will also be a large class that exits the elementary schools. If births remain at their current level the effect of large exiting classes at the 5th grade will start to offset the effects of large kindergarten classes in King County. Additional growth at elementary will have to come from growth at the continuing grades with gains from new residents moving into new or existing homes, or from an increase in kindergarten market share. As a result, we expect to see slower growth overall in elementary over the next decade in King County, even though some Districts may continue to see strong growth trends at the elementary level due to an increase in their housing stock, or a sharp increase in their elementary market share.

We also expect to see increasing growth at the middle and high school levels over the next several years as the recently large elementary classes roll up through the grades. And finally, as we look out over the next decade we know that the graduating classes from roughly 2022 to 2026 will be much larger (the larger kindergarten classes from recent years will start to graduate). This will exert a downward influence on enrollment in King County as well (unless the incoming kindergarten classes in those years are much larger). Enrollment will still grow between 2020 and 2026 but we may see some moderation of the growth trends in the County due to the larger graduating classes that we expect during this time period.

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So what does all of this mean for Mercer Island? Will Mercer Island experience slower growth at elementary? Will the District see a moderation in its growth trend between 2020 and 2026? To answer these questions we need to consider some of the dynamics of Mercer Island's enrollment trends. Why does enrollment on the Island decline or grow?

The first thing to understand about Mercer Island's enrollment is that, in a given year, the number of families with children moving into residences in the City generally exceeds the number of families moving out at almost every grade. The kindergarten enrollment, for example, is generally 75-100 students higher than the births from a given year. For example, the kindergarten enrollment in October 2016 was 242 students. This number was higher than the number of births that occurred on the Island five years earlier in 2011 (145 births). This is a typical pattern. More families with preschool age children move in than move out over a five year period, resulting in a kindergarten enrollment that is larger than the number of local births.

This pattern holds for most grade levels. The second grade enrollment in most years, for example, is generally higher than the first grade enrollment from the previous year. There are some years where the 11th and 12th grades see a net loss of students, but this is most likely due to higher dropouts at those grades, or a choice of some families to send their children into full-time Running Start programs.

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It is also important to note that the net increase at the high school level typically results in a graduating class that is larger than the kindergarten class that enters the following year. Over the past decade, the graduating classes from a given year have been anywhere from 77 to 135 students larger than the kindergarten class that entered the following school year. When the incoming kindergarten classes are smaller (due to smaller birth cohorts) and the graduating classes are larger, Mercer Island will tend to see very little gain in enrollment or even a net decline from year to year. This is the pattern that we saw between 2000 and 2007 when enrollment declined or grew very little from year to year.

Since the graduating classes are generally quite large (due to an influx of families at secondary) the District will only grow by enrolling larger kindergarten classes or by attracting more families with children at the other grades. Kindergarten is partially dependent on the size of the birth cohorts, but at the continuing grades, growth is dependent on attracting new families into existing homes or on the development of new homes that are attractive to families with children. The development of the Town Center area in recent years has contributed to some of the larger increases in enrollment that we have seen over the past decade. This trend, along with the larger birth cohorts has kept enrollment growing from 2008 to the present. So what about the future?

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Over the past two years, the birth cohorts that have entered at the kindergarten level have been slightly smaller than those from the previous three years in both King County and Mercer Island. Looking ahead the birth cohorts that become eligible for school over the next four years (kids born between 2012 and 2015) both in King County and on the Island are larger than what we have seen in the past two years. As a result we would predict that kindergarten enrollments in Mercer Island over the next four years will be as high as, or even slightly higher than the enrollment in 2016. And as we look beyond 2020 we expect the kindergarten classes in Mercer Island to remain in a range somewhere between 250 to 260 students per year.

We should also note that Mercer Island's share of the King County birth cohort is generally about one percent (K enrollment compared to County births five years prior), but it has declined some over the past three years. This may reflect the slowing of new housing development growth in the Town Center area, the slightly smaller birth cohorts from 2009 -2011 on the Island, the choice of some families with preschool age children to opt for other areas in the Puget Sound, or some combination of all these factors. Our kindergarten forecasts generally consider the size of the County and City birth cohorts as well as the effect of housing options and population growth. Over the next decade we believe that the District will continue to enroll about one percent of the County birth cohort in a given year, varying from year to year based on the amount of new housing, and based on how many actual births occur on the Island itself.

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All of these trends point to at least some growth at the elementary level over the next decade. We know that as the larger elementary classes from recent years roll up we will also see some growth at the middle and high school grades. It is also important to remember that the District typically sees a net gain of families at most grades in most years. In order to help us nail down the amount of K-12 growth we might see in the coming decade, and the effects at each grade level, we must consider the amount of housing and population growth we are likely to see during this time period.

In order to get a handle on housing and population growth we have consulted several different sources. First, we have considered data from the City which shows the amount of new housing development that is currently in the pipeline and slated for development over the next few years. Current data from the city of Mercer Island shows that there are two apartment complexes planned with 57 units each and 15 new single family developments. This is right in-line with estimates from the New Home Trends database.

Second, we looked at the assumptions about housing and population growth from the City of Mercer Island's comprehensive plan (completed in August 2016). The assumptions in the City plan depend primarily on the buildable lands report from King County (which specifies how many units are likely for given areas) and population estimates from the Puget Sound Regional Council's land use forecast.

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We have also looked at the two forecasts from the Puget Sound Regional Council for Mercer Island. The first forecast, which corresponds to the City's comprehensive plan, is the Land-Use forecast. This forecast predicts population and housing for Mercer Island based roughly on current trends. It assumes that the amount of land for development will increase in accordance with what we have seen most recently. This is not an unreasonable assumption and it still predicts continued population and housing growth in Mercer Island over time.

The second forecast from the Puget Sound Regional Council is the Land-Vision forecast. This forecast predicts greater population growth and greater housing density in Mercer Island and the region than the Land-Use forecast. This forecast is called Land-Vison because it envisions a different kind of development plan, one that more closely aligns with the goal of growth management to locate more and more of the population growth into city and urban areas that already have existing support services (police, fire departments, sewer, and all the other services that support the population). This forecast is also higher than those that many cities have recently used in developing their comprehensive plans. It should be considered a "high range" forecast for Mercer Island or any other area in the Puget Sound since it assumes greater density than is typical in the recent growth trends.

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The reason for consulting the higher Land-Vision forecast is that it gives us some way to see what might happen if the growth trends of recent years were to be ramped up for any number of reasons. If the city emphasizes more affordable housing options in the Town Center area we might see greater density and even more families with children. If light rail sparks development in areas around the train station we might again, see greater housing density and more opportunities for families with children to live on the Island. It is also possible that economic and population growth in the Seattle area will continue to exceed recent expectations resulting in continuing demand for more housing. This too might spur different development plans and opportunities on the Island.

It is important to note that we do not know if the Land-Vision forecast will come to pass. It is certainly way too optimistic in the near term (between now and 2020). But we also need to note that predicting long term trends is harder and more speculative and we need to at least consider the potential for dramatic changes from the recent past.

One way to deal with the uncertainty of the future is to create alternative forecasts based on different assumptions. This is the strategy we have pursued in the present report by producing a low, medium, and high range forecast. All of the forecasts consider private schools, births and enrollment trends, as well as the overall growth in the King County K-12 population.

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The three forecasts differ primarily in their assumptions about future housing and population growth on Mercer Island. The low forecast uses the PSRC Land-Use forecast which essentially projects current trends into the future. The high forecast uses the Land-Vision forecast which predicts much higher population and housing growth over the next decade and results in a much higher enrollment number. Finally, the medium range forecast strikes a balance between the two by assuming that growth will be higher than the Land-Use forecast (especially between now and 2020) but lower than the Land-Vision forecast over time.

The medium range forecast is our recommended forecast at this time but a couple of points need to be considered. First, there are not a lot of development projects in the pipeline as of today. It is possible that growth could slow some over the next few years, unless the City fast tracks some new development. It is possible, in other words, that Mercer Island's enrollment between now and 2020 could be close to or similar to the low forecast.

It is unlikely, however, that the low forecast captures all the potential development that might happen between 2020 and 2025 when light rail and other development will occur. Here the medium range forecast is probably a better planning tool. When it comes to facilities needs, it is better to be a little bit ahead of the curve (so you have enough space) than behind. The worst thing for a district is to have too little space to house the students that show up in a given year. This is what happened in the Seattle School District between 2008 and 2011.

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A second consideration to keep in mind is the earlier discussion about general enrollment trends in the County. As we noted earlier, between 2022 and 2026 the graduating classes in Mercer Island and throughout the region are likely to be larger. This will exert a downward pull on enrollment. After years of steady growth many Districts will see some moderation of this trend and slower growth between 2020 and 2025 than they will have experienced between 2010 and 2020. The medium range forecast shows this trend clearly with gains at elementary over time, big gains in the middle school and high school years in the middle part of the forecast, and then some moderation of the gains as the large graduating classes exit. Unless growth at the other grades is quite large between 2020 and 2026 (due to a substantial increase in housing and more families with children opting to live on the Island) there will be some slowing of the growth trends during this time period. This is certainly what will happen in King County generally, though some Districts will likely see a different trend due to new housing development and an increase in their K-12 market share.

The high forecast, on the other hand, does show what is possible, if development activity and the choices of families with children combine in a dynamic way to create better than expected K-12 growth on the Island. It would be unwise to assume that this scenario is likely at this time, but it should at least be considered as a possibility to watch for and be aware of, when doing future planning in the school district.

Introduction

Mercer Island and the Region

Finally, we should note that there are a variety of methods for doing forecasts and a variety of factors that might be considered. A variety of different forecasts were completed in the course of doing this study and we will present them in the forecast section of the report. As a general rule the average of different forecasts is generally better than a single forecast. Our medium range forecast is close to the average of three different cohort survival models. It is also close to the average of linear models that use births and population to predict total enrollment. We have also created housing yield forecasts that predict how many students we might see based on a set number of students per house (similar to recent averages) applied to different forecasts of future housing development.

The preferred medium range forecast is close to the average of all of these alternative methods. It should be, of course, because it is based on our assumptions about how much growth the District might see during certain time periods. The differences in the low, medium, and high forecasts are primarily due to differences in the size of each year's kindergarten class, assumptions about market share between public and private schools, and differences in how many future housing units might be added to the District's housing stock over time. More houses means greater overall population growth and potentially at least, greater growth in the K-12 population (assuming that future housing is suitable for families with children).

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Introduction

Mercer Island and the Region

It is also worth noting that future trends could turn out to be much different than what we have assumed in this forecast. Many people, including the present author, did not foresee the decline in home sales and prices that hit the region between 2007 and 2011 (although current enrollment trends are back in line with many of the long range forecasts that were done prior to that period). It is possible that a similar event or something completely different, but unexpected, could impact enrollment over the next decade. As a result we recommend that these forecasts be updated periodically to take account of new information.

The next sections of this report provide more detail on some of the enrollment and demographic trends that we have presented in this introduction. Each section provides charts and tables and is preceded with a set of bullet points that highlight the important information from the data. The last section of the report provides alternative forecasts of enrollment along with a detailed description of the methodology used to create the three main forecasts by grade level. Detailed numbers by grade level for each forecast are presented in Appendix A. There is also an Appendix B which provides some information about the downtown area. We have also included a third appendix that was part of the 2012 report. It presents a forecast of the Mercer Island resident population using the last three Census periods along with a general forecast of how much of an enrollment gain the District might expect between 2010 and 2020. Finally, Appendix D provides some demographic information compiled by the District showing information about private schools and transfers from other Districts.

Enrollment Trends
Mercer Island and King County

Enrollment Trends

- Enrollment in the Mercer Island School District is tracking very close to the projections completed in 2012.

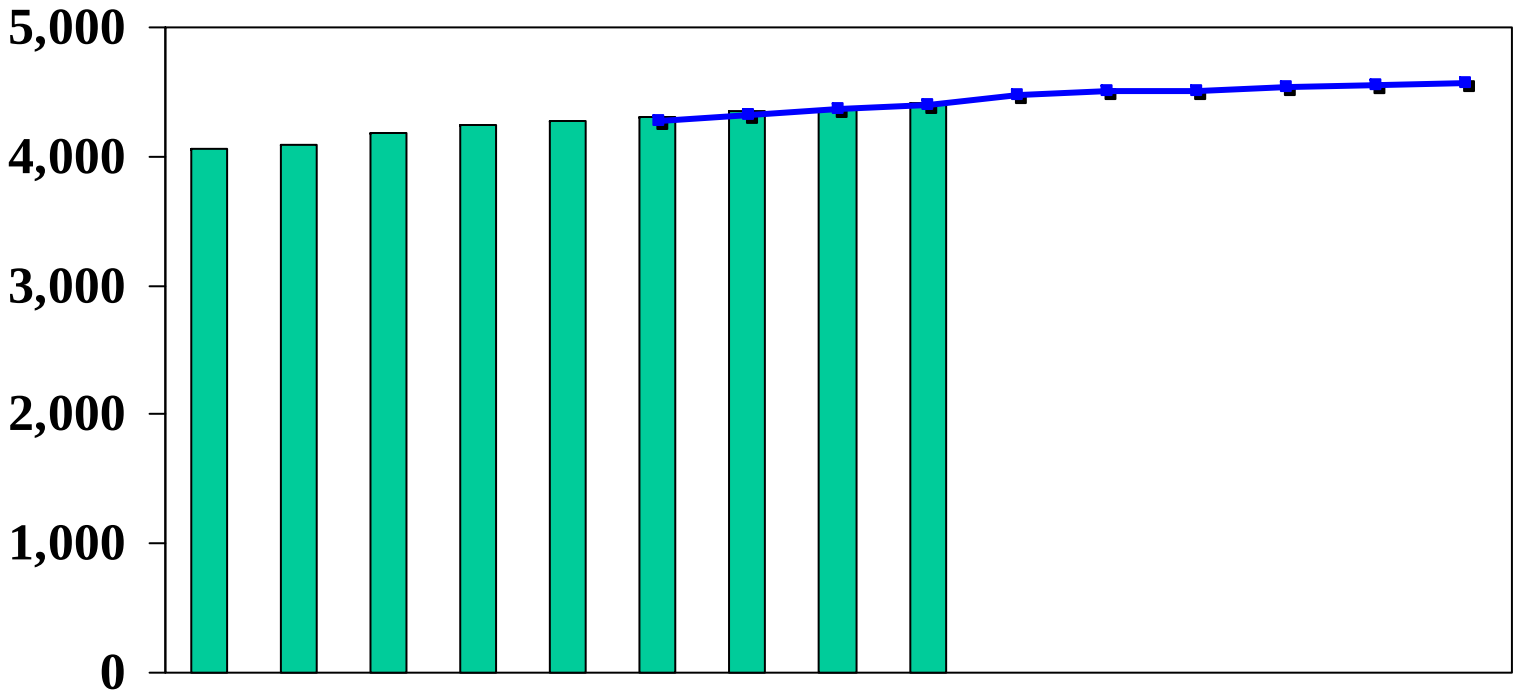
- Enrollment has been growing in most of the King County School Districts since 2010 primarily due to the larger birth cohorts that started entering the schools beginning with the 2011 school year.

- Although Mercer Island has been growing since 2008, the District's share of King County K-12 enrollment has declined some over the past few years. This indicates that Mercer Island's K-12 population is growing at a lower rate than the rest of the County.

- We expect strong enrollment growth in King County over the next five years and continued growth out to 2025.

- Between 2020 and 2025 there could be some slowing of the growth trends as large graduating classes during that time period exert a downward pull on enrollment.

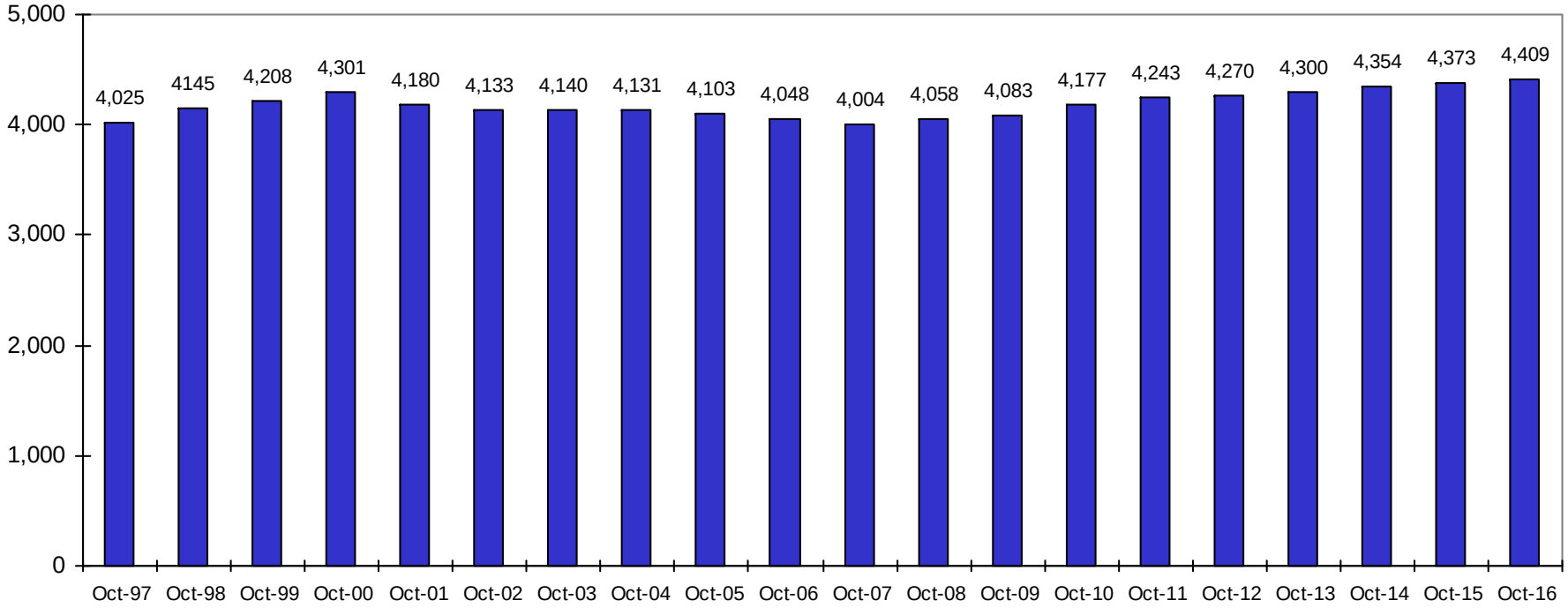
Forecast from 2012
Compared to Actual Enrollment



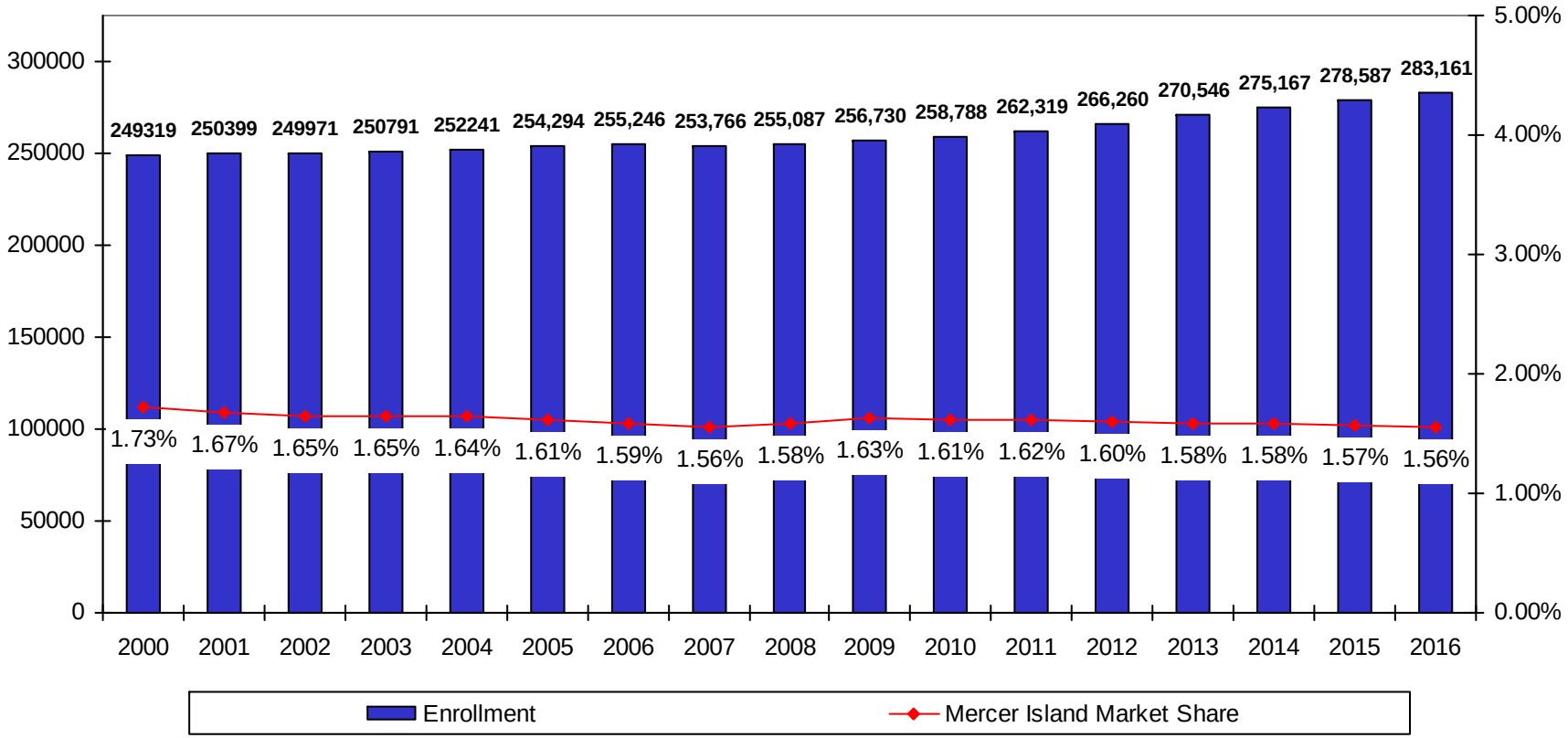
	Oct_08	Oct_09	Oct_10	Oct_11	Oct_12	Oct_13	Oct_14	Oct_15	Oct_16	Oct_17	Oct_18	Oct_19	Oct_20	Oct 21	Oct 22
Actual Enrollment	4,058	4,083	4,177	4,243	4,270	4,300	4,354	4,373	4,409						
Medium Forecast 2012						4,276	4,319	4,371	4,400	4,469	4499	4503	4541	4557	4565

District Enrollment Trend

P223 Enrollment (October)
Does Not Include Full-Time Running Start Students
or Students Enrolled in Open Doors

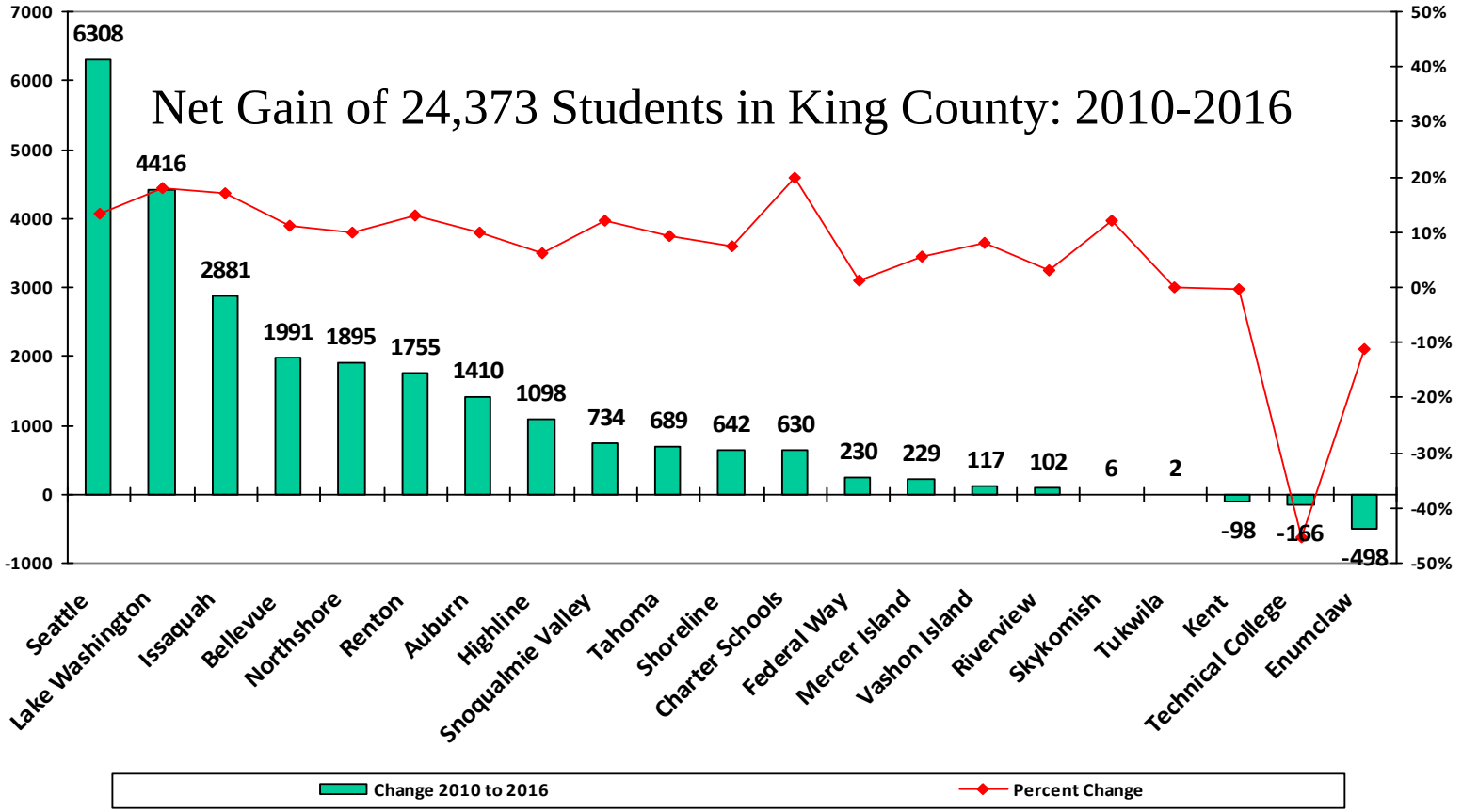


King County Public Schools Enrollment Trend and Mercer Island Market Share



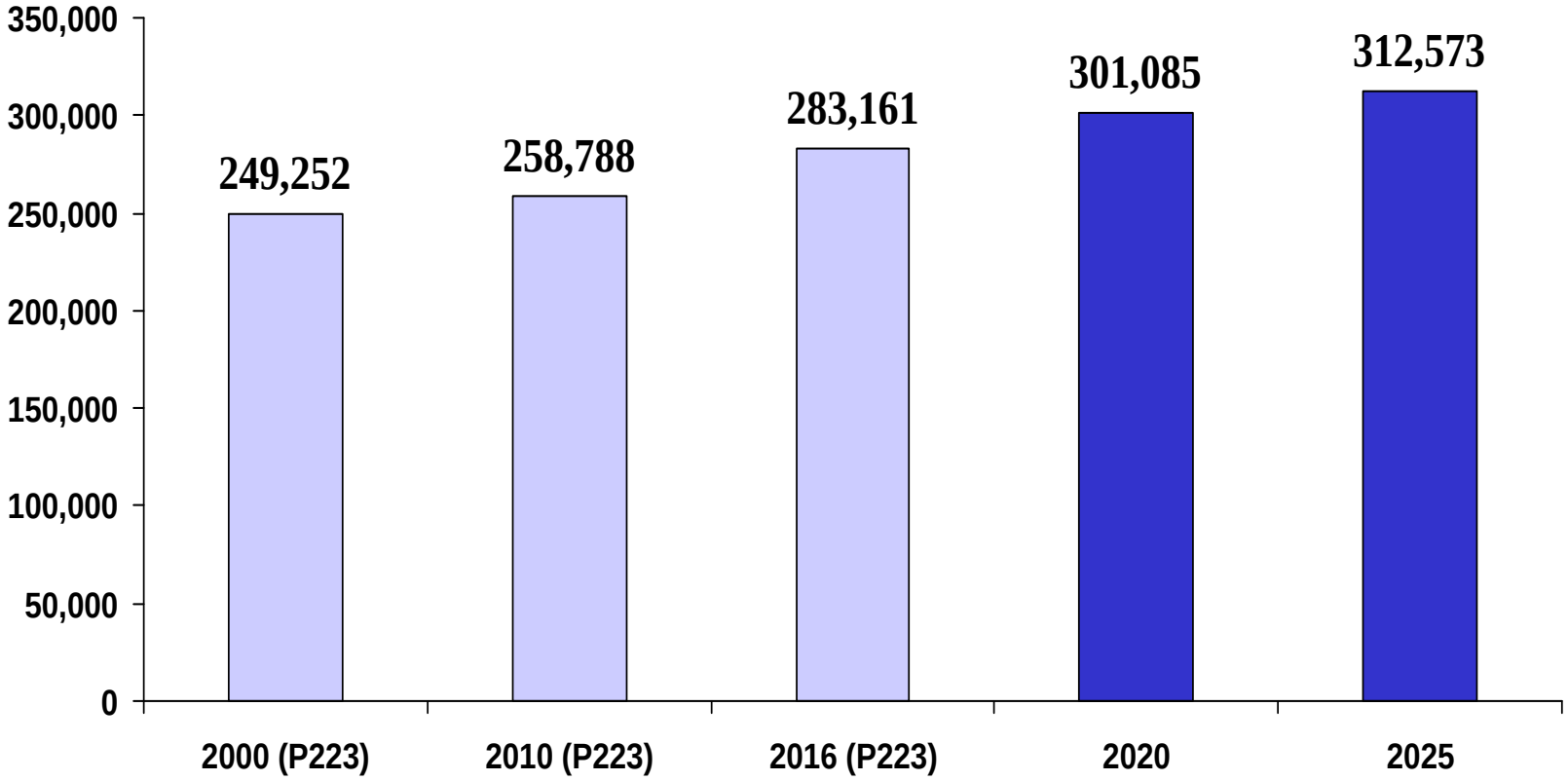
King County School Districts
Change in Enrollment
Oct *2010 to Oct 2016*
LAST SIX YEARS

Numbers may have changed since the original reporting of the data



Forecast of the King County K-12 Population

Using Cohort Survival, Actual Births, Birth Forecasts and Projected Changes in Population Growth During Certain Time Periods



Enrollment Patterns
Mercer Island School District

Enrollment Patterns

- Grade progression rates show the net gains or losses that occur when families with children move in and out over the course of a year. A rate greater than one indicates a net increase and a rate less than one indicates a net loss.

- To create a grade progression rate you divide the enrollment at a particular grade (say second grade) by the enrollment at the prior grade from the previous year (say first grade). These are also known as cohort survival ratios. This is the method that the State facilities department uses when doing forecasts for all school districts in the State.

- In Mercer Island the cohort survival/grade progression rates are greater than one at most grades indicating that more families with children move in than move out over the course of the year at most grades.

- The exception to this pattern occurs mostly at the 11^{th} and 12^{th} grade where dropouts, or students opting for full-time Running Start programs can sometimes lead to net losses in enrollment.

Enrollment Patterns

- Grade progression rates do not apply to kindergarten since there is no previous grade.

- At the kindergarten level we can compare enrollment in a given year to births that occurred five years prior. We can compare enrollment to the County births to get a sense of overall market share in the County.

- We can also compare enrollment to births on Mercer Island.

- Kindergarten enrollment generally exceeds the number of births on the Island that occurred five years prior to each enrollment year. This indicates that the number of families with preschool age children who move into the District over a five year period generally exceeds the number who move out.

- Because many families move in at the secondary level the high school graduating classes are generally substantially larger than the following year's kindergarten class. The District will only grow if it sees larger kindergarten classes or large net gains of students at the continuing grades.

Grade Progression Rate Example

- Rates for Different Grade Levels:
  - Elementary: K-4 moves into Grades 1-5
  - Middle schools: Grades 5-7 move into 6-8
  - High school: Grades 8-11 move into 9-12
  - A ratio greater than 1 indicates a net gain from families moving in over the course of a year; less than 1 indicates a net loss (more moving out than moving in).

Grade	2007	2008
K	232	254
1	276	270
2	294	290
3	255	305
4	311	281
5	279	318
	3654	**3726**

K-4 Total	Gr1-5 Total	Ratio
1368	**1464**	107%

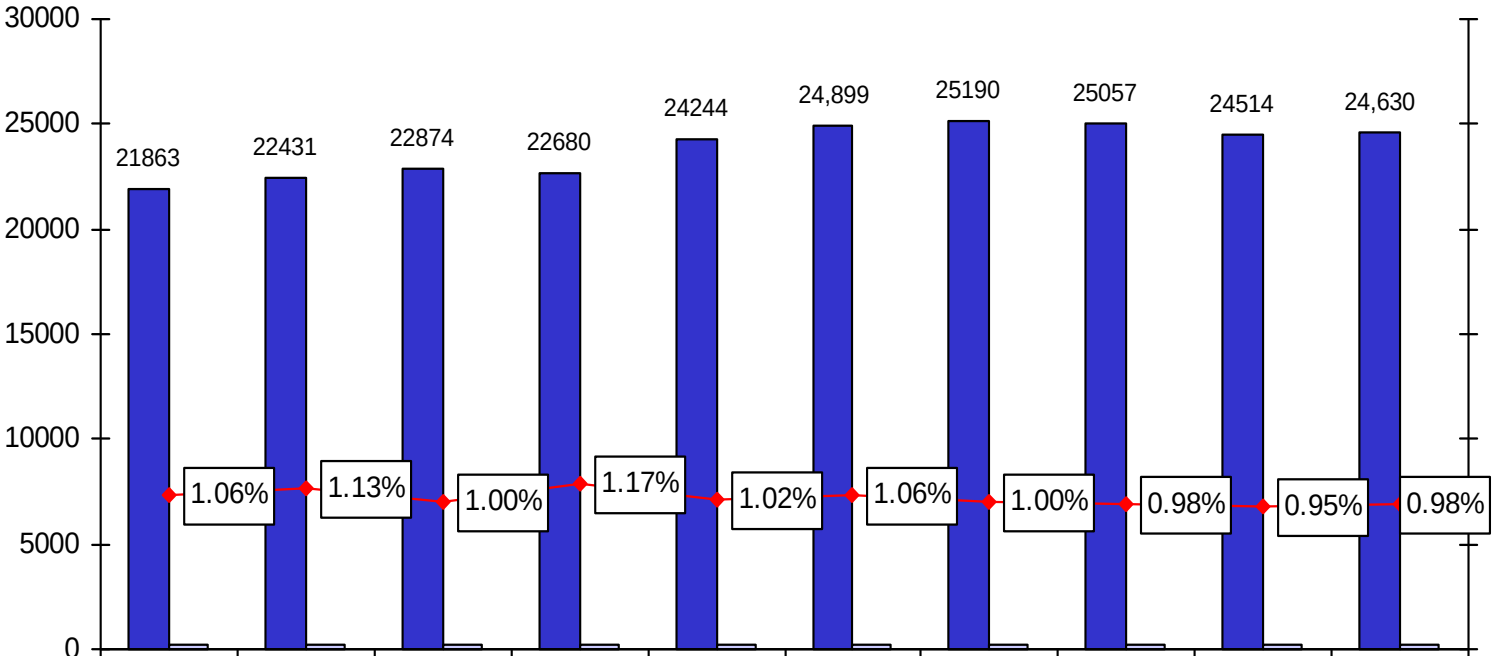
Average Grade Progression Rates
(3, 5, and 10 Year Averages)

Cohort Ratio Averages for the Mercer Island School District

	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12
3 Year	1.109	1.077	1.070	1.041	1.040	1.039	1.045	0.992	1.045	1.022	0.989	0.943
5 Year	1.122	1.072	1.074	1.060	1.034	1.047	1.040	1.000	1.047	1.017	1.000	0.947
10 Year	1.130	1.063	1.066	1.066	1.023	1.037	1.037	1.014	1.043	1.018	1.012	0.972

Mercer Island

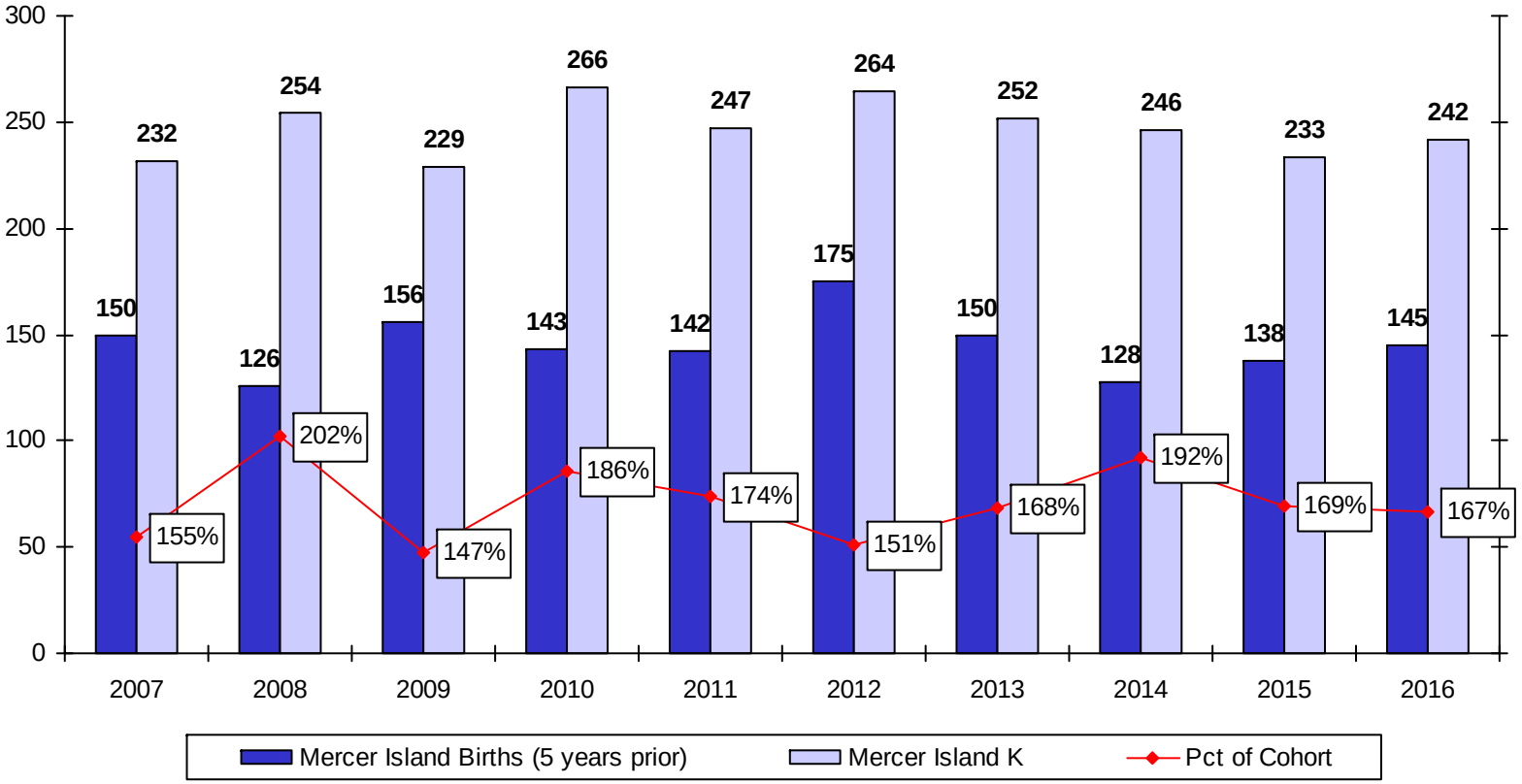
K Enrollment as a Percent of King County Births



	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
KC Births (5 Years Prior)	21863	22431	22874	22680	24244	24,899	25190	25057	24514	24,630
Mercer Island K	232	254	229	266	247	264	252	246	233	242
Pct of Cohort	1.06%	1.13%	1.00%	1.17%	1.02%	1.06%	1.00%	0.98%	0.95%	0.98%

Mercer Island

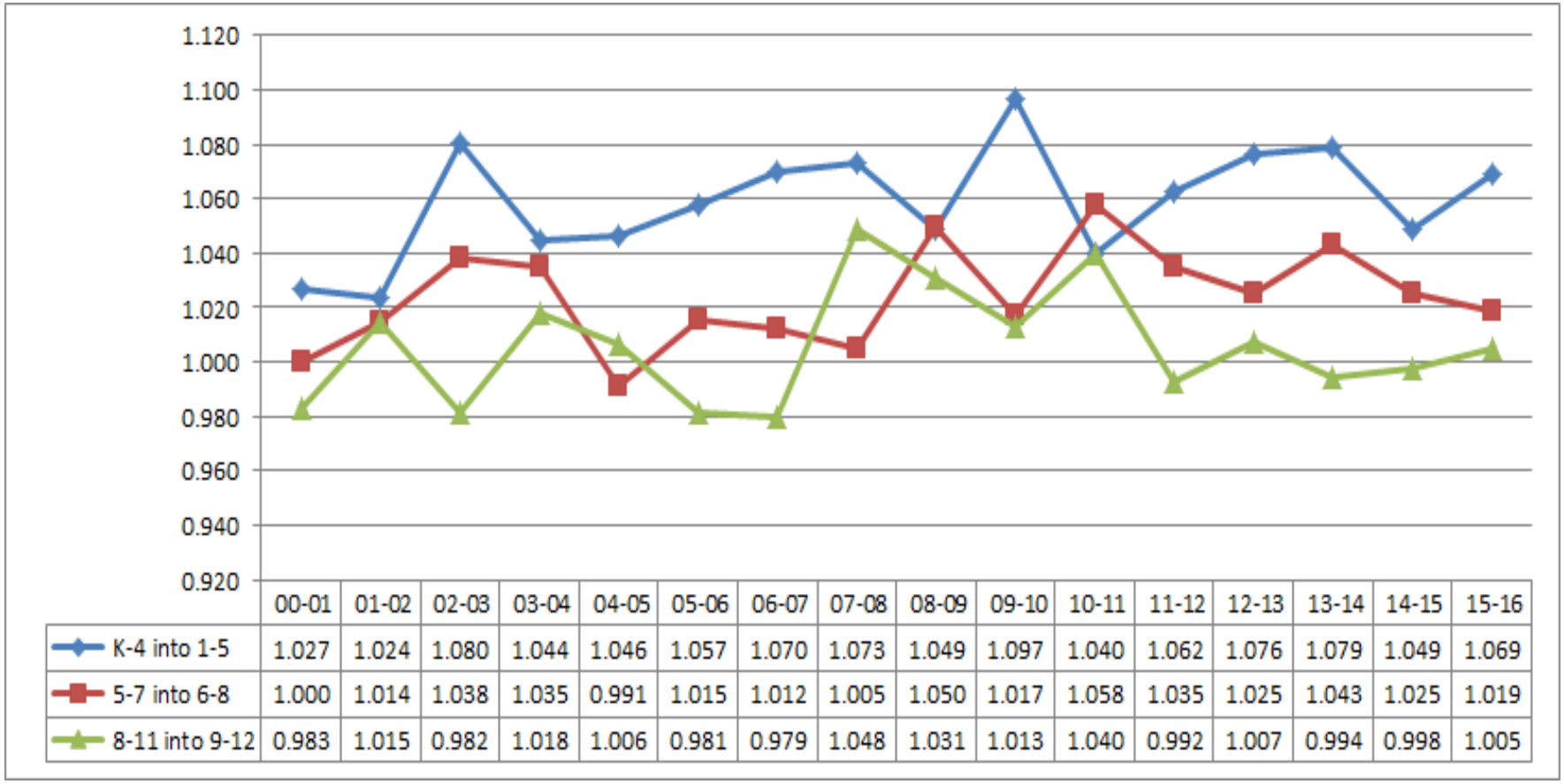
K Enrollment as a Percent of City Births



Grade Progression Rates Aggregated

Elementary, Middle and High

Mercer Island Public Schools



	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10	10-11	11-12	12-13	13-14	14-15	15-16
K-4 into 1-5	1.027	1.024	1.080	1.044	1.046	1.057	1.070	1.073	1.049	1.097	1.040	1.062	1.076	1.079	1.049	1.069
5-7 into 6-8	1.000	1.014	1.038	1.035	0.991	1.015	1.012	1.005	1.050	1.017	1.058	1.035	1.025	1.043	1.025	1.019
8-11 into 9-12	0.983	1.015	0.982	1.018	1.006	0.981	0.979	1.048	1.031	1.013	1.040	0.992	1.007	0.994	0.998	1.005

Birth Trends

Births and Enrollment

Key Points and Highlights

- There have been approximately 2,700 more births per year on average in King County between 2006 and 2015 than in the previous decade (1996 to 2005).

- As these classes have entered the schools (beginning in 2011) we have seen a marked increase in the K-12 population in King County.

- Based on birth and enrollment trends we expect a net gain of approximately 18,000 more students in King County by 2020.

- Over the past six years the majority of the school districts in King County have seen some net gains in enrollment.

- We expect all of the school districts in the County to see at least some net gains in enrollment between now and 2025 as the larger birth cohorts continue to enroll.

Births and Enrollment

Key Points and Highlights

- We could see some slowing of elementary growth in King County in the middle part of the this decade as the large exiting 5th grade classes offset some of the growth from large kindergarten classes.

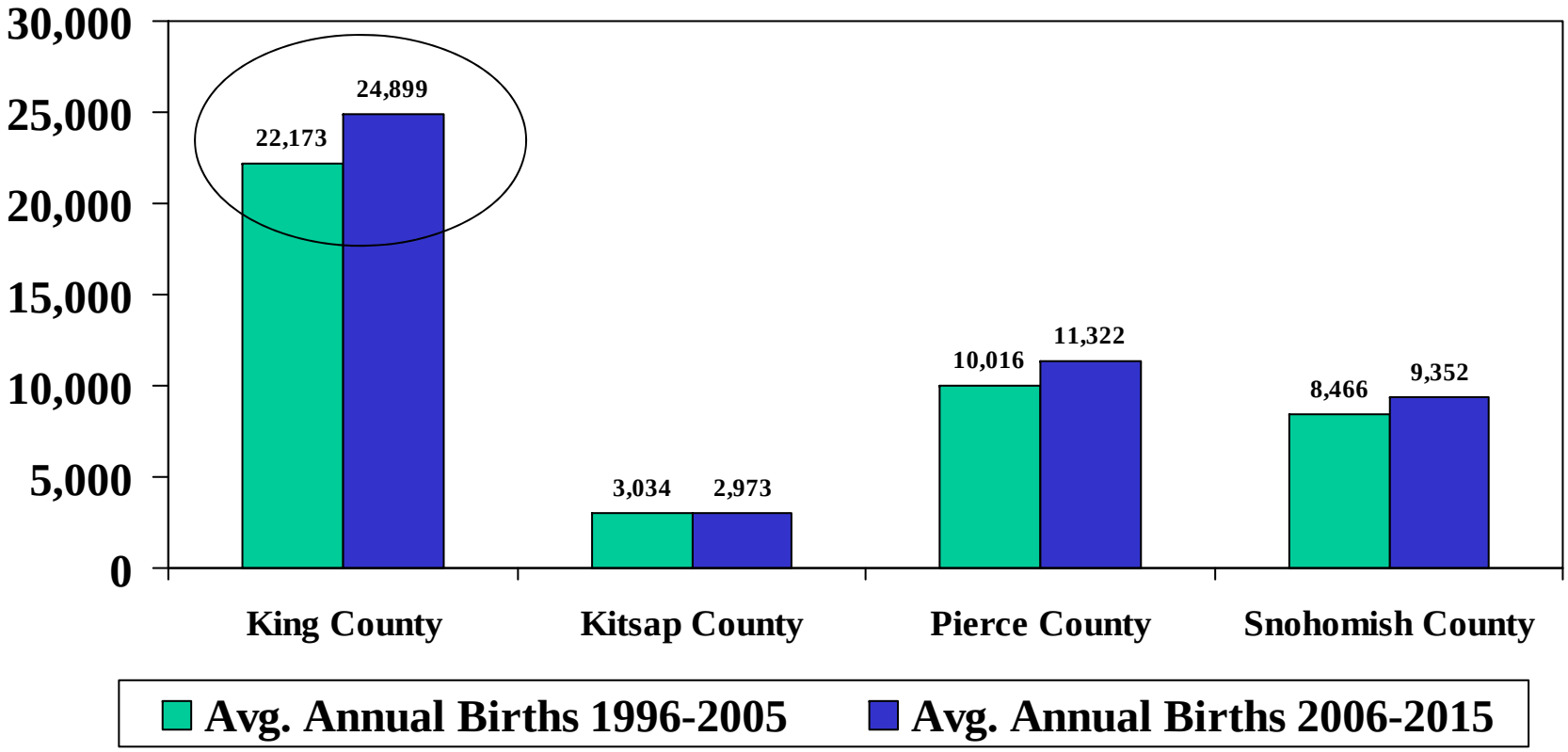
- Eventually the large elementary classes from recent years will roll up into the middle and high school grades creating bigger gains at those levels over the next several years.

- The number of births on Mercer Island in a given year generally makes up about six tenths of the total births in the County.

- Although this number is small, as we noted earlier, the number of families with preschool age children moving into Mercer Island generally exceeds the number moving out over a five year period, resulting in a Kindergarten enrollment that is generally larger than the birth cohort that was born on the Island five years earlier.

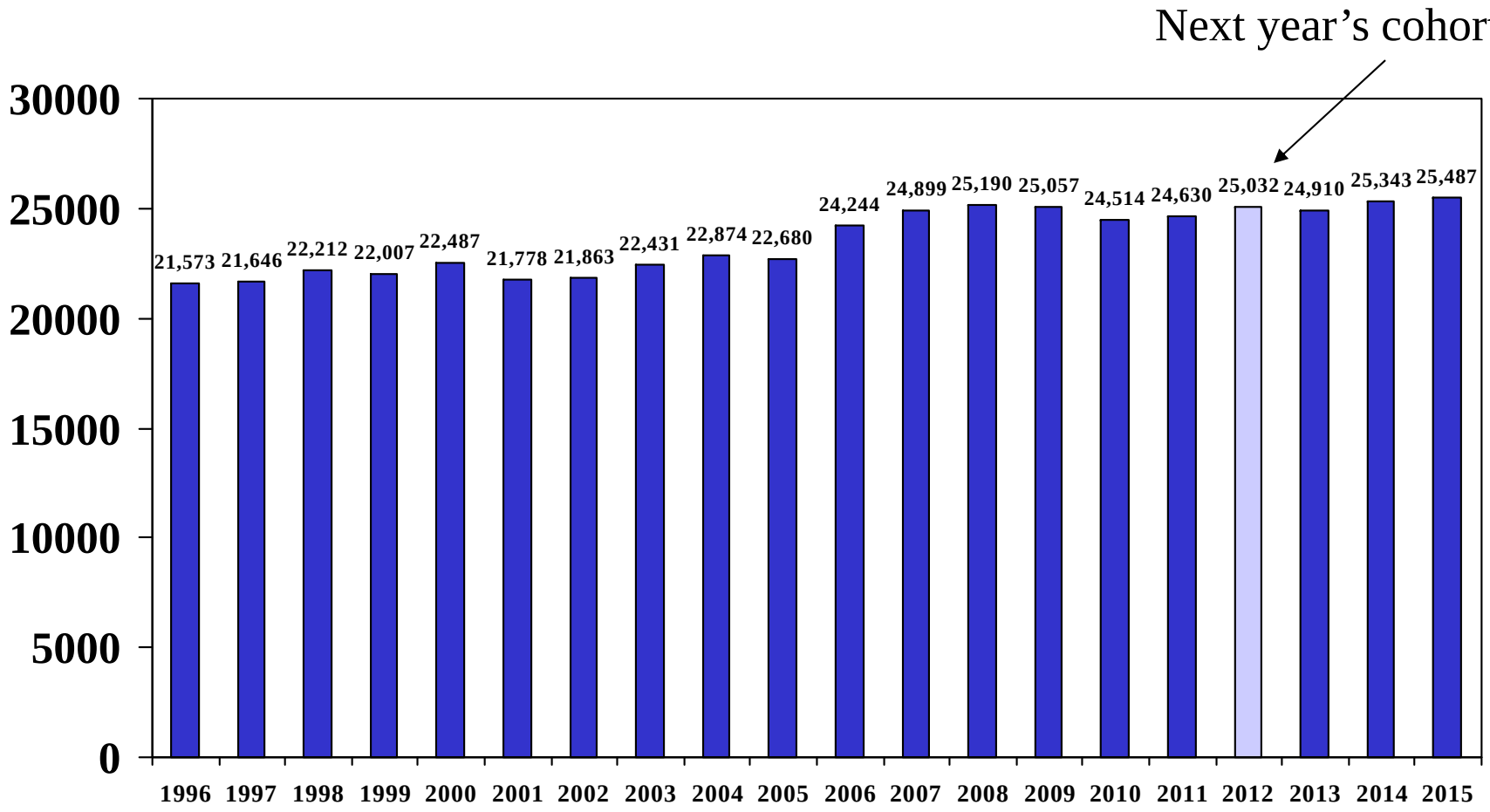
Average Annual Births by County

Source: State of Washington Department of Health Birth Files



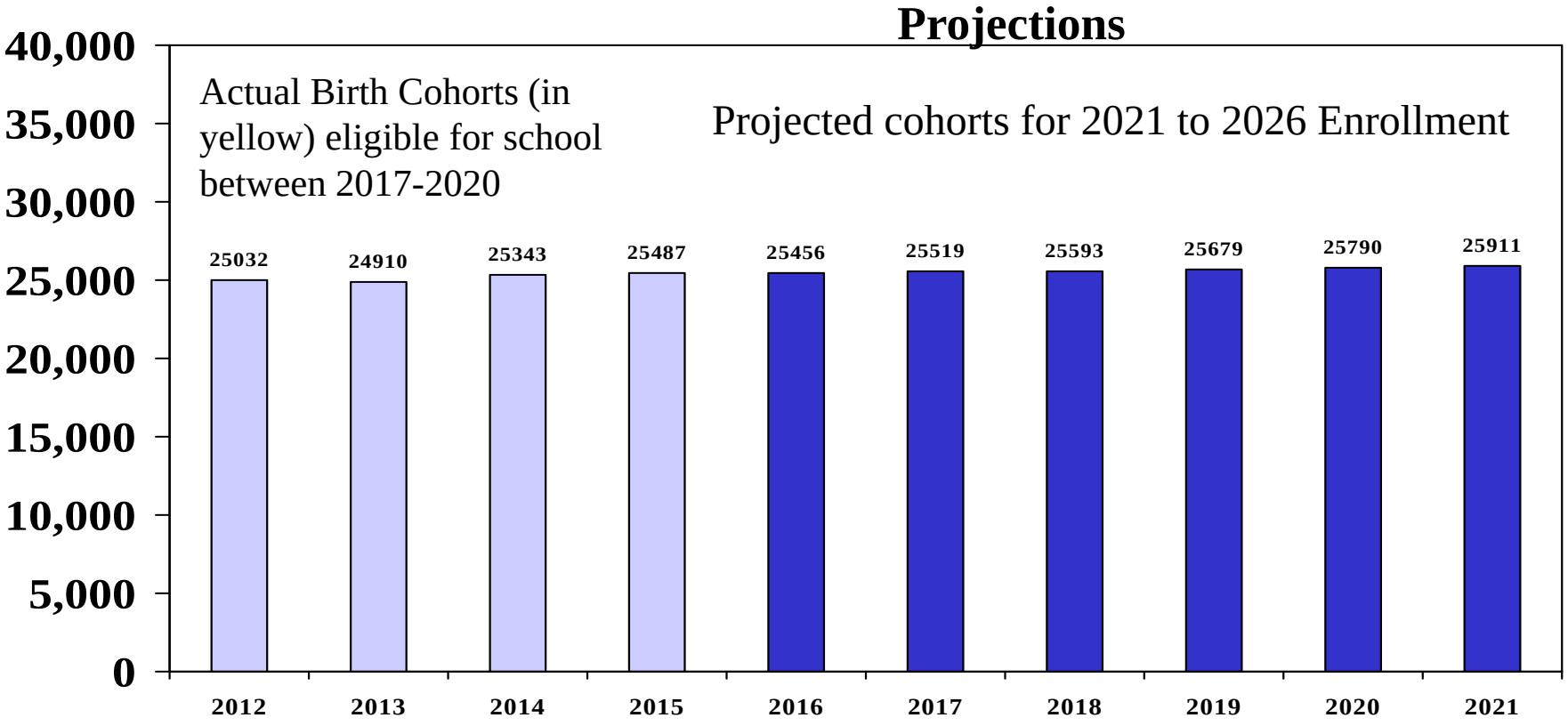
King County Births

Source: Washington State Health Department



King County Birth Projections

(Based on the Average of 2014 and 2015 Fertility Rates
and Projected Growth in Females in Their Child-Bearing Years
Using the OFM Medium Range Population Forecast)



Population Trends

Population Trends

- Based on current rates of growth King County's population is likely to exceed the medium range forecast of the population that was completed by the Office of Financial Management in 2012. The estimated population in 2016 is just a little below the forecasted number for 2020.

- Mercer Island's population has been growing at a slower rate than the overall County since 2010. As of 2016 Mercer Island's population makes up about 1.12% of the total population in King County.

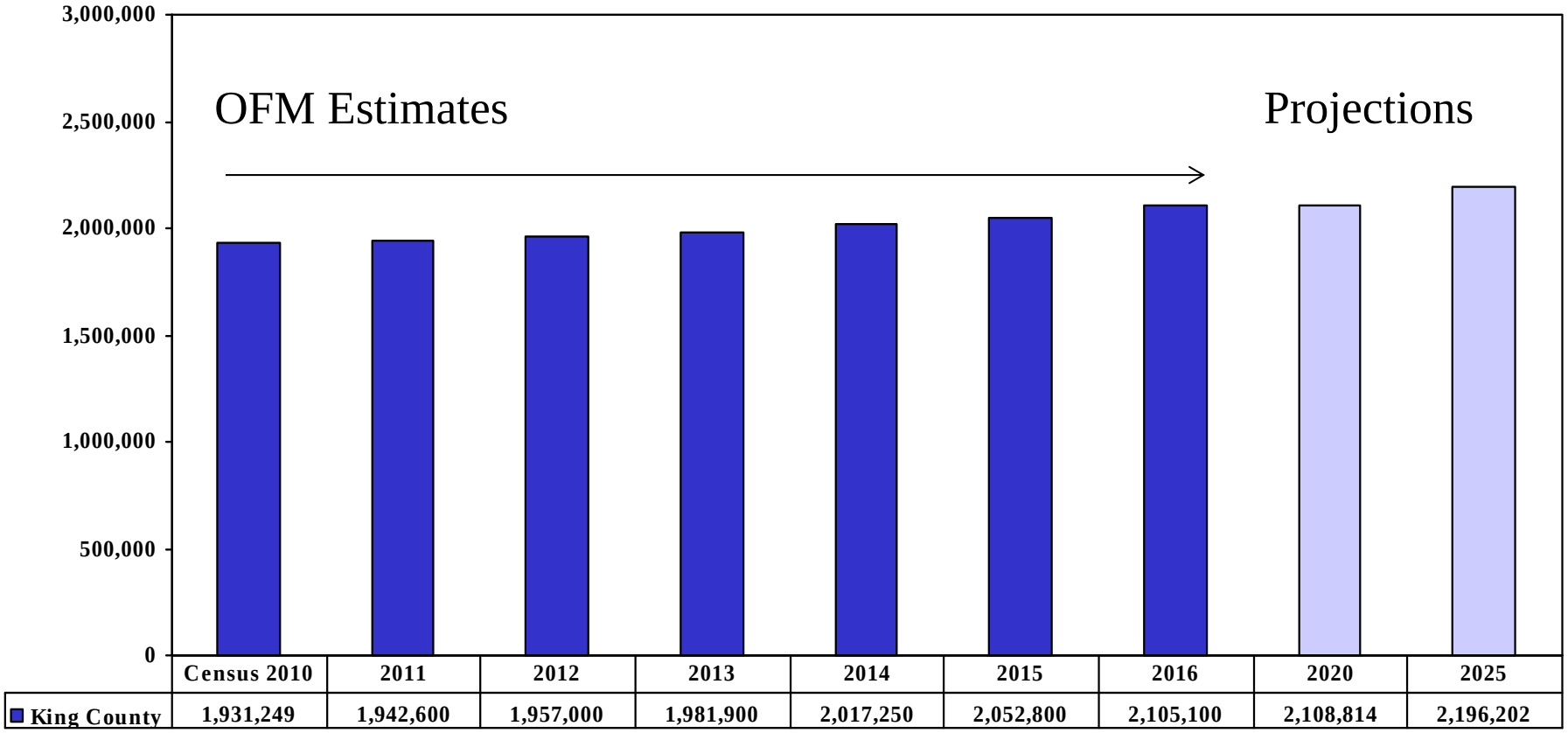
- We have created three alternative forecasts of future population growth on the Island. One is based off of the PSRC's land-use forecast (low), the other is based off of the PSRC's land vision forecast (high). The third alternative forecast predicts growth that is in-between these low and the high estimates.

- A simple linear model that predicts total enrollment based on Mercer Island's population and County births provides one way to predict future enrollment on the Island. The results of two models (using low and high estimates of the population) are presented in the forecast section of the report.

Population Growth and Projections

King County

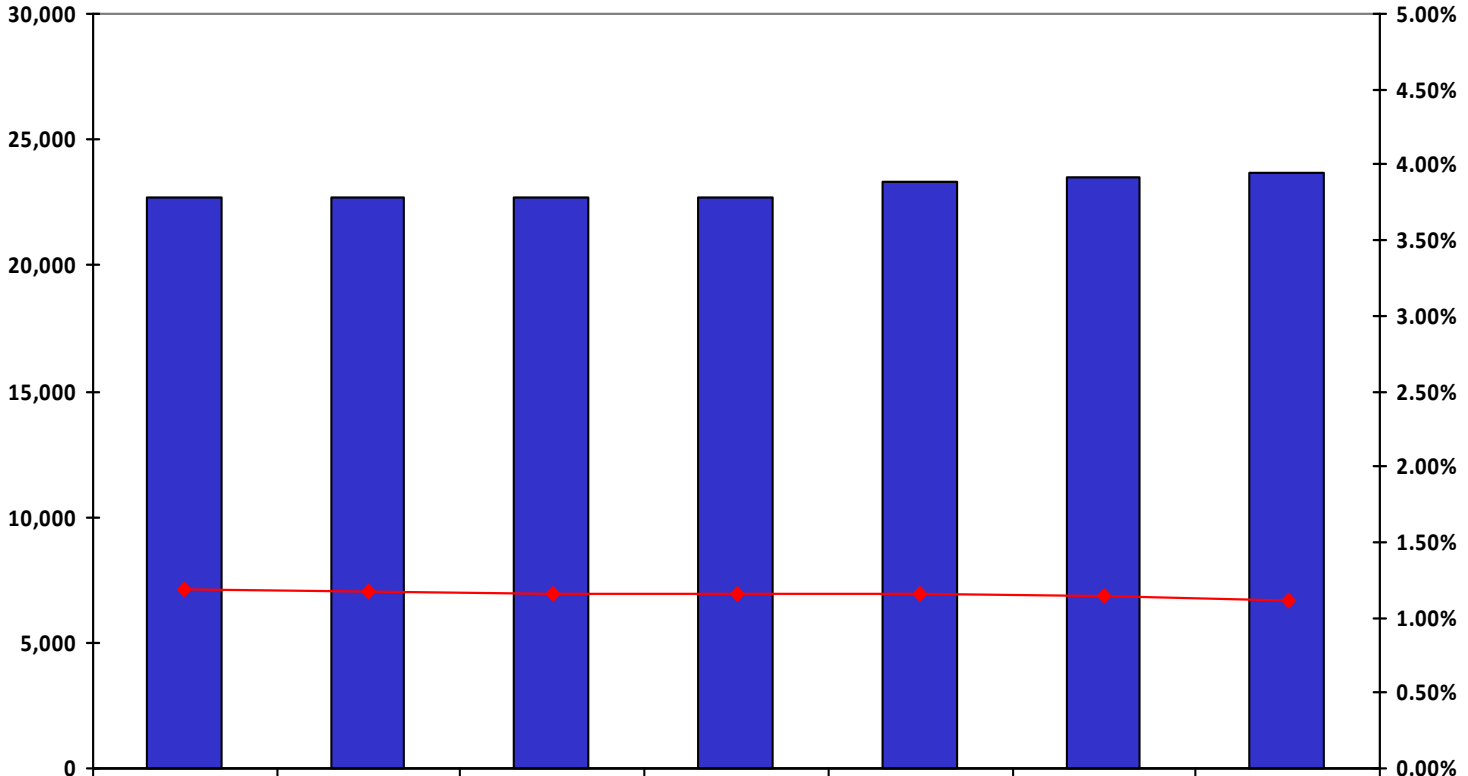
Source: Office of Financial Management of the State of Washington



	Census 2010	2011	2012	2013	2014	2015	2016	2020	2025
King County	1,931,249	1,942,600	1,957,000	1,981,900	2,017,250	2,052,800	2,105,100	2,108,814	2,196,202

Mercer Island Population

Census and State Estimates



	Census 2010	2011	2012	2013	2014	2015	2016
Population	22,699	22,710	22,690	22,720	23,310	23,480	23,660
% of County Population	1.18%	1.17%	1.16%	1.15%	1.16%	1.14%	1.12%

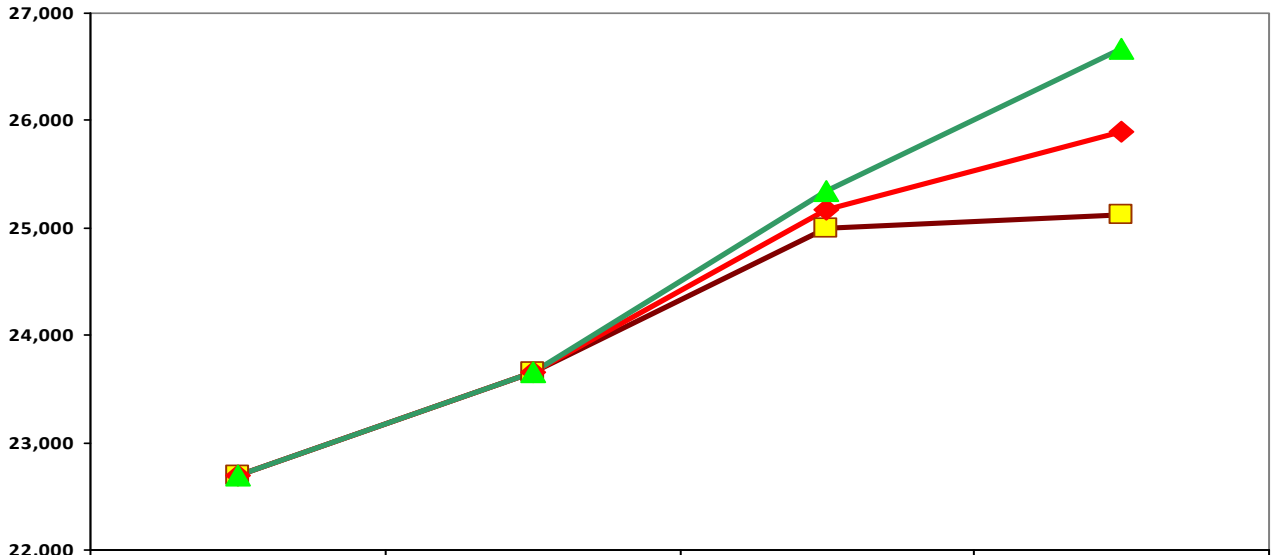
Mercer Island Resident Population Forecasts

Alternative Forecasts Based on Different Assumptions About Growth.

The PSRC Land Use Forecast is Roughly Based on Current Land Use Trends*

The PSRC Land Vision Forecast Assumes Greater Density and More Housing

The Medium Range Alternative Lies In-Between the Low and High PSRC Alternatives



	Census 2010	2016 State Estimate	2020 Forecast	2025 Forecast
Based off of PSRC Land Use Baseline	22,699	23,660	24,991	25,116
Medium Range Alternative	22,699	23,660	25,165	25,893
Based off PSRC Land Vision Forecast	22,699	23,660	25,339	26,669

*The PSRC Land Use Baseline forecast is similar to the Mercer Island City Comprehensive Plan Assumptions.

Housing Trends

Housing Trends

- Home sales in Mercer Island have improved over the past four years with approximately 400 homes a year being bought and sold. This is near the totals we saw prior to the collapse of the housing market between 2007 and 2011.

- Over 1000 units were added to the District's housing stock between the 2000 and 2010 Census period. There has been a net gain of approximately 550-575 additional units between 2011 and 2016 according to regional and City estimates. According to the City Comprehensive plan 462 units were added to the Town Center area between 2006 and 2012.

- Information from conversations with the City Permit Supervisor suggests that in addition to adding units there are also situations in which housing units are eliminated or replaced. For example, someone may replace two existing single family homes with a single home. There are also some instances in which a single home is replaced with two or more new homes. Estimates of future housing growth look at the net gain in units. As should be evident it is quite possible for a lot of new homes to be built but the net gain of units could be small if larger structures replace two or more smaller structures.

Housing Trends

- We have created alternative forecasts of future housing growth. Similar to our population forecasts we have used the PSRC land-use and PSRC land-vision forecasts, as well as an alternative that is somewhere in the middle.

- Based on our reading of the City comprehensive plan and the PSRC documents we expect some increase in multi-family housing units, relative to single family over time (especially with the high forecast estimate). But it is likely that single family units will still make up between 65%-70% of the City's housing stock.

- Our forecast of future housing is based on occupied units (rather than total units). The vacancy rate was approximately 8% according to 2010 Census data. This was twice as high as the rate from the 2000 Census.

- It is likely that the higher rate reflects the effects of housing foreclosures and slowing development that was part of the decline in the housing market beginning in 2007.

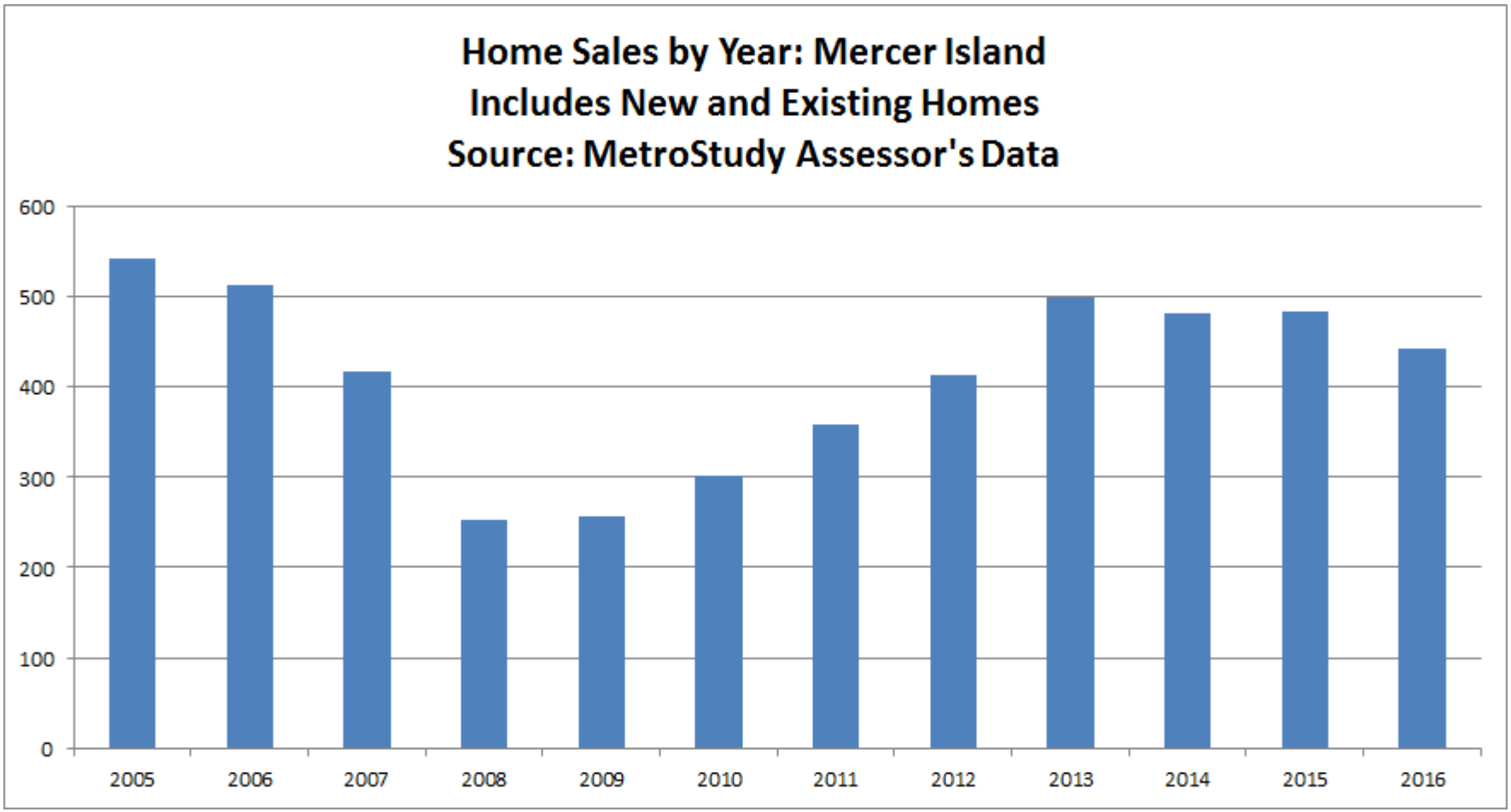
Housing Trends

- Based on 2010 Census data there are approximately 46 students for every 100 occupied housing units in the District. This number is higher than either Lake Washington or Bellevue, and well above the rate in Seattle (see page 52).

- Assuming this number remains the same we can estimate how many students might be enrolled in the future by multiplying the number of students per house by our alternative housing forecasts.

- A forecast based on the low, medium, and high range housing numbers is presented in the forecast section of the report.

Single Family and Condo Home Sales Mercer Island



Puget Sound Regional Council Estimate of Permitted Units in Mercer Island

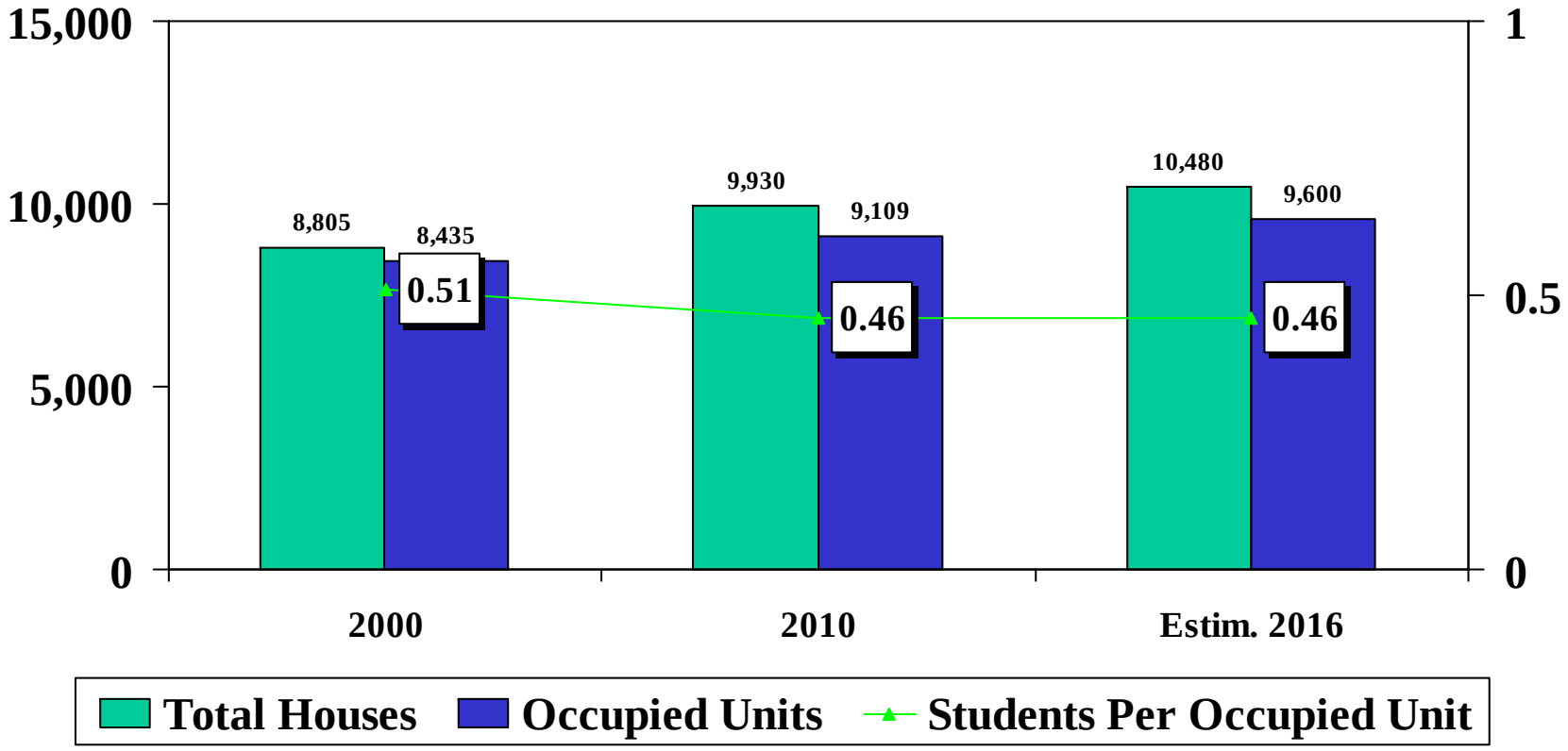
Year	JURIS	NEWUNITS	LOSTUNITS	NETUNITS	SF	MF1-2	MF3-4	MF5-9	MF10-19	MF20-49	MF50+	MH	OTH
2011	*MERCER ISLAND*	196	-21	175	2	7	0	0	0	0	166	0	0
2012	*MERCER ISLAND*	121	-21	100	4	4	0	6	0	0	86	0	0
2013	*MERCER ISLAND*	66	-45	21	19	2	0	0	0	0	0	0	
2014	*MERCER ISLAND*	272	-43	229	18	2	0	0	0	0	209	0	0
2015	*MERCER ISLAND*	67	-40	27	25	2	0	0	0	0	0	0	0
		722	-170	552	68	17	0	6	0	0	461	0	0

(PSRC data is collected from County and City juridications on an annual basis)
(Data for 2016 is not yet available)

SF = Single family
LostUnits = Demolished or replaced
MF# = Number of permits for Multi-family housing of different sizes

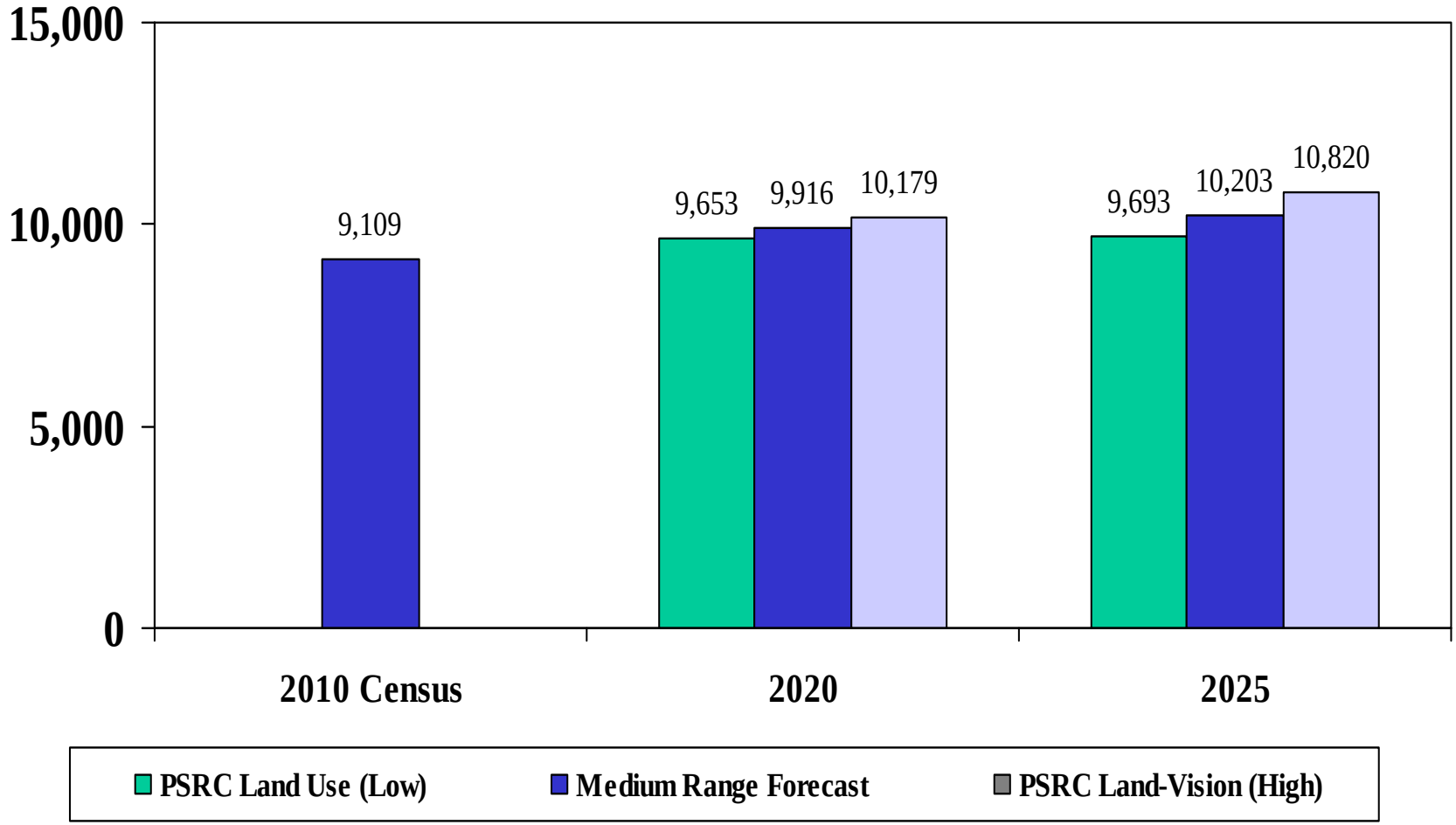
Please NOTE: Data from the City Permit Supervisor (Linda Pineau) showed a net gain of about 575 units between 2011 and 2016, right in line with these estimates. Differing methodologies may result in different numbers but we know that somewhere between 500-600 units have been added to the City's housing stock since the 2010 Census. There were also 203 rebuilds in which existing homes were torn down and rebuilt.

Housing Units in Mercer Island
Total and Occupied
K-12 Public School Students Per House



Future Housing Forecasts
Number of Occupied Units

Based off of PRSC Land Use Baseline and Land Vision Forecasts and a Medium Alternative



K-12 Public School Students Per House (King County Districts)

School District	P223 Oct 2010 Enroll	Census 2010 Total Housing Units	Census 2010 Occupied Units	Rounded Estimated K-12 Students Per 100 Homes	Rounded Estimated K-12 Students Per 100 Occupied
Tahoma	7,394	13,835	13,153	53	56
Snoqualmie Valley	6,019	13,693	12,635	44	48
Auburn	14,343	32,762	30,704	44	47
Kent	26,630	60,010	56,621	44	47
Issaquah	16,881	38,765	36,642	44	46
Federal Way	21,724	50,518	47,551	43	46
Mercer Island	4,177	9,930	9,109	42	46
Enumclaw	4,472	10,516	9,877	43	45
Riverview	3,152	7,470	7,019	42	45
Tukwila	2,908	7,353	6,817	40	43
Northshore	19,390	49,801	46,787	39	41
Highline	18,101	50,913	47,160	36	38
Bellevue	18,008	56,376	50,892	32	35
Lake Washington	24,592	76,389	71,711	32	34
Shoreline	8,808	28,028	26,561	31	33
Vashon Island	1,421	5,552	4,606	26	31
Renton	13,558	48,991	45,526	28	30
Seattle	46,794	308,858	283,793	15	16
Skykomish	49	823	330	6	15

**Note: The number of K-12 students per house is estimated using Census housing counts and the October 2010 P223 enrollment. The number of students per 100 homes was rounded to the nearest whole number.*

Private Schools

Private Schools

- Students on Mercer Island may attend private schools that are located on the Island, in Seattle, or in other areas around the Puget Sound.

- Data from District personnel shows a drop in the number of students enrolling in private schools from the Island between 2007 and 2016. This data is based on exit surveys, however, and may not accurately reflect the numbers enrolled in private schools (see Appendix D). There is, however, other evidence to support some decline in private school enrollment.

- If we look at data for private schools in King County (from OSPI) we can note that enrollment has been growing for the most part since 2010, though at a slower rate than the public schools.

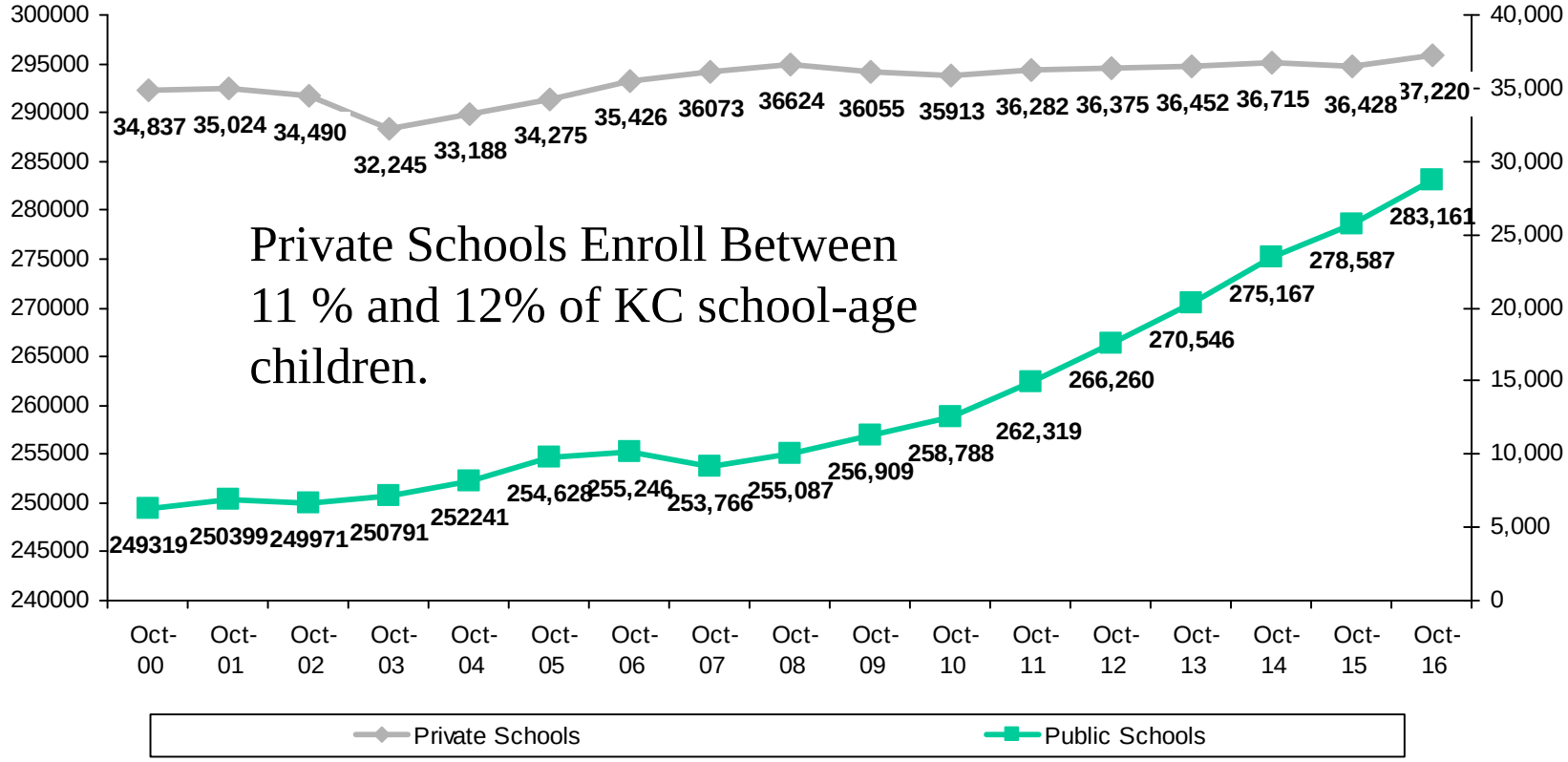
- Private school enrollment has been declining in Pierce and Snohomish County though the declined has leveled off in the past two years.

- Enrollment for private schools located on Mercer Island, has declined by about 26 students since hitting a peak in 2010.

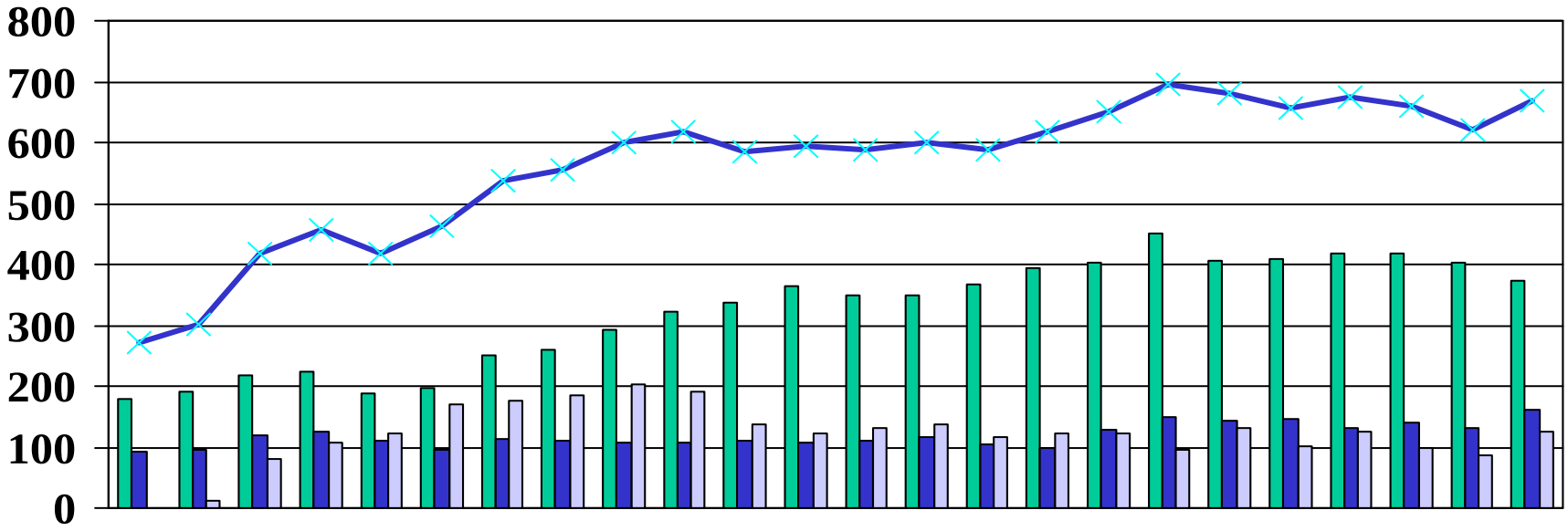
Public and Private School Enrollment King County (K-12 Only)

Source: P223 and P105 Report --State of Washington

Headcount



Enrollment for Private Schools Located in Mercer Island's Service Area



	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2015
K-5	179	192	219	223	189	196	250	260	293	321	338	363	350	349	368	395	402	450	406	410	419	419	404	373
6-8	93	97	120	125	109	95	112	111	106	106	110	107	109	115	105	100	127	150	143	146	132	141	130	161
9-12	0	13	80	108	121	171	175	185	202	190	137	123	130	137	115	122	121	95	131	101	125	100	87	125
Total	272	302	419	456	419	462	537	556	601	617	585	593	589	601	588	617	650	695	680	657	676	660	621	669

Enrollment Projections

Alternative Projections

Based on Different Models

- Before creating our final forecast models we created a set of alternative forecasts based on different methods. Some of the alternative forecasts (like the cohort models) consider births and enrollment trends by grade. Other forecasts predicted the total enrollment only based on housing, population and births. A description of each forecast is provided below.

- **3 and 6 Year and 10 year Cohort Models:** These models show what might happen if the average of the grade level enrollment trends for the past three, six, and ten year period were to continue into the future. These models can be good if you believe that the most recent trends (e.g., the most recent three years) will not change much in future years. They are less reliable when future demographic trends look different from the recent past.

- **Linear Models Based on County Births and Local Population:** These models use the number of County births, and projected births along with the three alternative forecasts of Mercer Island's population to predict K-12 enrollment. Generally the higher the births and the population the higher the enrollment since these two indicators are highly correlated with enrollment. Linear trend models for each grade were also completed but the results are not presented here (based on births, population and housing growth and previous grade enrollment).

Alternative Projections

Based on Different Models

- **Housing Yield Forecasts:** These models apply the number of K-12 public school students per house from the 2010 Census to the alternative projected totals of future occupied housing units in the District. These models assume that the number of students per house remains relatively stable over the course of the forecast. This is a reasonable assumption for the initial years of the forecast though it is possible that the number of students per house could change in future years based on the specific combination of housing types (multi-family versus single family) and/or based on changes in the percentage of the population that is school age. The assumptions that it will remain stable is supported by the latest data for 2016 which shows about the same number of students per house as the 2010 Census count. We should note, however, that we do not know the exact vacancy rate for 2016. We have assumed it is the same as the Census but if it is lower the number of students per occupied house would also be lower.

- **Results:** The results of these different models are shown on the following pages. In general the average of multiple forecasts is often a better indicator of the future than any one forecast. Our final forecast numbers were adjusted for predicted growth and gains in housing and population so that they would correspond relatively close to the low, medium, and high range options presented here.

Forecast Estimates Using a Variety of Methods

Cohort Forecasts*	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
3 Year Avg. Cohort	4,409	4,452	4,473	4,456	4,471	4,474	4,447	4,439	4,432	4,403	4,399
5 Year Avg. Cohort	4,409	4,475	4,518	4,519	4,557	4,581	4,572	4,586	4,597	4,588	4,598
10 Year Avg. Cohort	4,409	4,494	4,548	4,554	4,599	4,634	4,628	4,647	4,669	4,675	4,696
Linear Models (Based on Total Enrollment Only -- 10 Year History)											
County Births and MI Pop (Low)	4,409	4,470	4,509	4,565	4,647	4,649	4,657	4,666	4,676	4,688	4,701
County Births and MI Pop (High)	4,409	4,483	4,521	4,578	4,697	4,733	4,776	4,819	4,864	4,910	4,957
Students Per House Forecast (Based on Alternative Pop/Housing Forecasts											
Student Per House Low Growth	4,409	4,416	4,422	4,428	4,433	4,437	4,441	4,444	4,448	4,452	4,455
Student Per House Medium Growth	**4,409**	**4,447**	**4,484**	**4,522**	**4,559**	**4,586**	**4,612**	**4,638**	**4,665**	**4,691**	**4,718**
Student Per House High Growth	4,409	4,477	4,545	4,612	4,680	4,729	4,778	4,828	4,877	4,926	4,975
Average of all Forecasts	**4,464**	**4,503**	**4,529**	**4,580**	**4,603**	**4,614**	**4,633**	**4,653**	**4,667**	**4,687**	

**Kindergarten enrollment in the cohort forecasts is based on the District's average share of the County birth cohort (K enrollment compared to births) for the past three, six, and ten years, multiplied by actual and projected birth cohorts expected to enroll between 2017 and 2026*

Final Enrollment Projections Methods and Assumptions

` An enrollment forecast is based on assumptions and mathematical calculations that convert these assumptions into numbers. The previous sections have identified a number of assumptions about births, grade level enrollment trends, population, and housing growth that are likely to impact the district in the coming years. This section describes the specific assumptions that guided the development of the forecasts.

The forecasts in this document were based on consideration of several factors:

The size of future birth cohorts and the projected share of that cohort that is likely to enroll in Mercer Island kindergartens.

Average grade-to-grade growth as students progress through the grades.

Predicted growth in the K-12 population based on alternative housing and population forecasts for the District.

The number of public school students per house.

The relationship between public and private school enrollment.

Methods and Assumptions

Births and Kindergarten Enrollment

Both county and city births were used to project kindergarten. The number of county births is known through 2015 which means we can predict kindergarten enrollment based on actual births out to 2020. Beyond that point births were projected based on the most recent fertility rates for the county and the forecast of the number of women likely to reach their childbearing years over time, using the medium range county forecast from the State. Births for the city of Mercer Island are also known through 2015. Births on Mercer Island beyond 2015 were predicted based on the correlation between city and county births. On average city births make up about six-tenths of a percent of the births in the county. This trend has been relatively consistent over the past decade.

Projecting Kindergarten Enrollment

Kindergarten enrollments were projected using birth-to-k ratios. The birth-to-k ratio compares the kindergarten enrollment in a given year to births five years prior to that year. The District's birth-to-k ratio has averaged about one percent of county births over the past decade. The District's share of city births is greater than 100% since there are families with preschool age children who move to Mercer Island before their children reach kindergarten age. The projection model uses the six year median birth-to-k ratio for both the city and the county to predict future enrollment, taking an average of the two estimates. This method was deemed reasonable since the number of city births is very small and does not always capture the larger birth trends that are likely to affect K-12 enrollment in the county. We also know from our linear models (reported earlier) that County births together with projected population totals for Mercer Island are highly correlated with K-12 enrollment.

Continuing Grades

Projecting Grades 1-12

The forecasts at grades 1-12 were based on grade level cohort ratios which predict the net gain and/or loss in enrollment as students progress from one grade to the next. In the last report we used a ten year average in order to account for low and high growth years that stretched across the time period when housing growth slowed and the recovery begin. The ten year average was considered a good gauge of the average amount of growth that is typical for each grade.

For this analysis we used the average rate from the past three years which reflects the most recent trends. The models on page 60 show the different cohort forecasts and it is clear that the three year average produces a more conservative forecast. But our final numbers will also be adjusted for projected changes in housing and population growth (next section) to reflect where we believe enrollment will land using a variety of alternative models. The enrollment at each grade level was multiplied by the appropriate cohort ratio to project enrollment forward and then adjusted for projected changes in population and housing growth over time.

Adjustments for Population Growth

Adjustments for Population Growth

The cohort model shows what might happen if the current trends were to continue indefinitely into the future, with some adjustments for projected changes in the birth trends over time. What we also need to consider, however, is the effect of additional population and housing growth in Mercer Island and the county, especially growth in the K-12 population.

Our previous models based on population and housing provide us with alternative estimates of future enrollment. We applied growth factors to our forecasts to simulate the effects of low, medium and high growth rates. In other words, we tried to get our forecast to align as closely as possible with the low, medium, and high range estimates provided in the earlier section of this report. The numbers will differ to some degree, of course, because they take into account the size of each year's graduating class and each year's entering kindergarten, as well as the way in which students roll up through the grades. The final numbers in all of the models are, however, close to the low, medium, and high range estimates presented earlier.

The medium range forecast shows the District growing at a slightly lower rate than the overall County K-12 population in the near term, but at about the same rate as the rest of the County between 2020 and 2026. This reflects our assumption that housing and population growth will be greater during this time period than it will be in the earlier part of the forecast period (2017 to 2020).

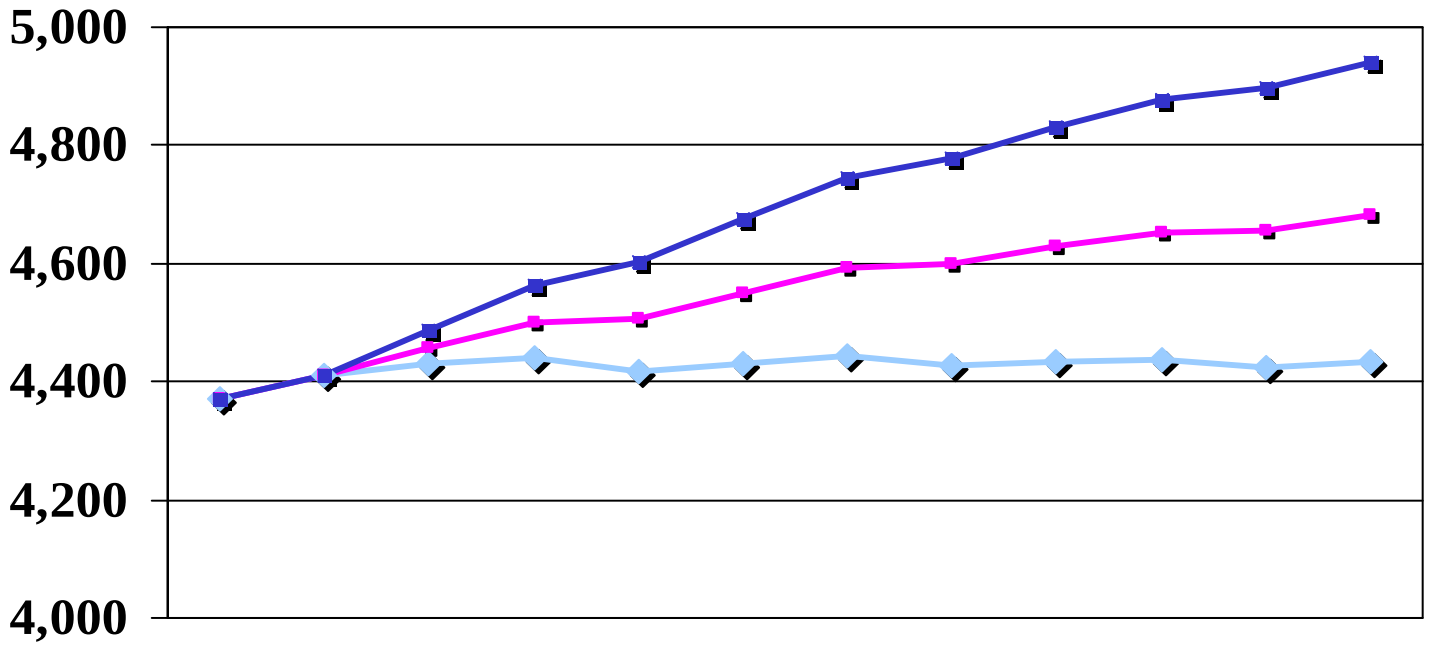
Considerations

The low and high forecasts show what might happen if housing and population growth were to be lower or higher than what is assumed in the medium range forecast. As noted in the introduction it is possible that enrollments over the next few years could conform to the low range forecast unless there is a sharp upturn in housing development. The medium range forecast, however, is considered to be the best estimate of long range enrollment trends over the course of the decade. And as noted earlier the high range forecast shows what might happen if housing and population growth were to be higher than expected for a variety of reasons (increased housing density, greater availability of affordable housing, or even greater than expected population growth in Seattle and the region, or even an increase in the number of K-12 students per household).

Finally, these forecasts assume that changes in enrollment are equal from year to year. In reality enrollment may grow a lot in one year, a little in another, decline in another year and stay at the same level in the following year. The recommended forecast assumes a certain amount of growth between now and 2017 and between 2020 and a different rate of growth between 2021 and 2026. But the actual growth in a given year may vary from the averages assumed over the course of the forecast.

Mercer Island District Forecast
Alternative Forecasts 2017-2026

Based on Grade Level Trends and Alternative Projections of Population and Housing



	Oct-15	Oct-16	Oct-17	Oct-18	Oct-19	Oct-20	Oct-21	Oct-22	Oct-23	Oct-24	Oct-25	Oct-26
Low	4,371	4,409	4,429	4440	4417	4430	4444	4428	4433	4438	4424	4434
Medium (Recommended)	4,371	4,409	4,458	4501	4508	4551	4592	4600	4628	4653	4656	4681
High Range Forecast	4,371	4,409	4,487	4563	4601	4674	4744	4778	4830	4878	4899	4941

Appendix A

Final Forecast Numbers

Headcount Forecasts by Grade Level

Mercer Island (October Headcount Enrollment)

Births	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Mercer Island Births	140	130	167	136	121	155	132	150	126	156	143	142	175	150	128	138	145
King County Births	21817	21573	21646	22212	22007	22487	21778	21863	22,431	22874	22680	24244	24,899	25190	25057	24514	24,630
K Enroll as % of Cnty	1.20%	1.11%	1.05%	1.05%	0.95%	1.11%	1.14%	1.06%	1.13%	1.00%	1.17%	1.02%	1.06%	1.00%	0.98%	0.95%	0.98%
K Enroll as a % of City	186%	184%	136%	171%	172%	161%	188%	155%	202%	147%	186%	174%	151%	168%	192%	169%	167%
City % of County Cohort	0.64%	0.60%	0.77%	0.61%	0.55%	0.69%	0.61%	0.69%	0.56%	0.68%	0.63%	0.59%	0.70%	0.60%	0.51%	0.56%	0.59%

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
K	261	239	227	233	208	250	248	232	254	229	266	247	264	252	246	233	242
1	259	276	257	257	260	224	283	276	267	283	280	294	277	298	287	273	256
2	306	277	291	276	259	274	227	294	294	280	304	294	311	297	317	305	298
3	330	309	276	308	282	266	290	255	306	311	305	305	310	336	317	343	324
4	314	330	309	297	330	292	275	311	281	316	339	320	331	337	361	326	356
5	360	318	332	331	301	345	306	279	320	280	328	341	322	339	358	356	348
6	362	356	316	349	341	301	353	298	282	347	282	343	362	338	360	378	363
7	350	364	368	325	359	339	304	369	304	290	346	311	348	370	358	369	398
8	349	352	369	381	340	352	343	308	365	314	305	357	320	350	374	356	363
9	343	347	354	351	392	344	343	334	336	383	320	337	362	332	364	398	368
10	350	335	343	360	355	387	346	337	341	350	393	335	339	364	333	368	412
11	340	334	343	333	364	363	379	342	348	357	358	407	336	342	364	332	361
12	377	343	348	339	340	366	351	369	360	343	351	352	388	329	319	334	320
Tot	**4,301**	**4,180**	**4,133**	**4,140**	**4,131**	**4,103**	**4,048**	**4,004**	**4,058**	**4,083**	**4,177**	**4,243**	**4,270**	**4,284**	**4,358**	**4,371**	**4,409**
Growth	93	-121	-47	7	-9	-28	-55	-44	54	25	94	66	27	14	74	13	38
Percent	2.2%	-2.8%	-1.1%	0.2%	-0.2%	-0.7%	-1.3%	-1.1%	1.3%	0.6%	2.3%	1.6%	0.6%	0.3%	1.7%	0.3%	0.9%
	1830	1749	1692	1702	1640	1651	1629	1647	1722	1699	1822	1801	1815	1859	1886	1836	1824
	1061	1072	1053	1055	1040	992	1000	975	951	951	933	1011	1030	1058	1092	1103	1124
	1410	1359	1388	1383	1451	1460	1419	1382	1385	1433	1422	1431	1425	1367	1380	1432	1461
King County Public Schools K-12	249,319	250,104	249,971	250,791	252,241	254,294	255,246	253,121	254,398	256,545	259,144	261,939	266,260	270,546	275,167	278,587	283,161
Mercer Island Market Share	1.73%	1.67%	1.65%	1.65%	1.64%	1.61%	1.59%	1.58%	1.60%	1.59%	1.61%	1.62%	1.60%	1.58%	1.58%	1.57%	1.56%

Low Range Forecast (Growth Rates Based off of the Low Range Pop/Housing Forecast)

	6 year Trends at Kindergarten		
	Median	**SD+1**	**SD-1**
% County	1.00%	1.04%	0.96%
% City	170%	183%	157%
City % of County	0.62%	0.69%	0.56%

Projected Births

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
City Births	148	156	179	163	153	153	154	154	155	155
Cnty Births	25,032	24,910	25,348	25,487	25,456	25,519	25,593	25,679	25,790	25,911
% County	0.98%	1.01%	1.01%	1.02%	0.99%	0.99%	0.99%	0.99%	0.99%	0.99%
% City	154%	154%	154%	153%	153%	152%	152%	151%	151%	150%

Rollup				
Ratio	*Adjusted for Future Pop/Housing Growth*			
Used	**2017**	**2018-20**	**2021-26**	**Priv. Schls**
0.97%	0.975	0.980	0.983	0.999
1.109	0.994	0.996	1.000	0.999
1.077	0.994	0.996	1.000	0.999
1.070	0.994	0.996	1.000	0.999
1.041	0.994	0.996	1.000	0.999
1.040	0.994	0.996	1.000	0.999
1.039	0.994	0.996	1.000	0.999
1.045	0.994	0.996	1.000	0.999
0.992	0.994	0.996	1.000	0.999
1.045	0.994	0.996	1.000	0.999
1.022	0.994	0.996	1.000	0.999
0.989	0.994	0.996	1.000	0.999
0.943	0.994	0.996	1.000	0.999

Projections

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
K	245	252	257	261	253	253	254	255	256	257
1	267	270	278	284	289	280	281	282	282	284
2	274	286	289	298	305	311	301	302	303	304
3	317	292	304	308	319	326	332	322	323	324
4	335	328	302	315	320	331	339	345	335	336
5	368	347	339	313	327	333	344	352	359	348
6	359	380	358	351	324	340	345	357	365	372
7	377	373	395	372	366	338	354	360	372	381
8	392	372	369	390	369	363	335	351	357	369
9	377	408	387	383	407	385	379	350	367	373
10	374	383	415	393	391	416	393	386	357	374
11	405	368	377	408	389	387	411	389	382	353
12	338	380	345	354	385	366	364	387	366	360
Tot	**4,429**	**4440**	**4417**	**4430**	**4444**	**4428**	**4433**	**4438**	**4424**	**4434**
Change	20	11	-23	14	14	-15	5	5	-14	10
Percent	0.4%	0.3%	-0.5%	0.3%	0.3%	-0.3%	0.1%	0.1%	-0.3%	0.2%
K-5	1806	1775	1770	1778	1813	1834	1851	1858	1858	1852
6-8	1129	1126	1122	1113	1059	1041	1035	1068	1095	1122
9-12	1494	1540	1524	1539	1572	1554	1547	1512	1472	1460

Projection King County K-12

KC K-12	287,385	291,392	296,628	301,085	304,522	307,537	310,160	311,900	312,573	312,981
Market share	1.54%	1.52%	1.49%	1.47%	1.46%	1.44%	1.43%	1.42%	1.42%	1.42%

Medium Range Forecast (Growth Rates Based off of the Medium Range Pop/Housing Forecast)

	6 year Trends at Kindergarten		
	Median	**SD+1**	**SD-1**
% County	1.00%	1.04%	0.96%
% City	170%	183%	157%
City % of County	0.62%	0.69%	0.56%

Projected Births

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
City Births	148	156	179	163	153	153	154	154	155	155
Cnty Births	25,032	24,910	25,348	25,487	25,456	25,519	25,593	25,679	25,790	25,911
% County	0.99%	1.03%	1.03%	1.04%	1.01%	1.01%	1.01%	1.01%	1.01%	1.01%
% City	154%	154%	154%	153%	153%	152%	152%	151%	151%	150%

Rollup Ratio Used	*Adjusted for Future Pop/Housing Growth*			
	2017	**2018-20**	**2021-26**	**Priv. Schls**
0.97%	0.990	0.995	0.998	1.000
1.109	1.000	1.002	1.006	1.000
1.077	1.000	1.002	1.006	1.000
1.070	1.000	1.002	1.006	1.000
1.041	1.000	1.002	1.006	1.000
1.040	1.000	1.002	1.006	1.000
1.039	1.000	1.002	1.006	1.000
1.045	1.000	1.002	1.006	1.000
0.992	1.000	1.002	1.006	1.000
1.045	1.000	1.002	1.006	1.000
1.022	1.000	1.002	1.006	1.000
0.989	1.000	1.002	1.006	1.000
0.943	1.000	1.002	1.006	1.000

Projections

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
K	248	256	261	265	257	257	258	259	260	261
1	268	276	284	290	295	286	287	288	289	290
2	276	290	298	307	314	320	310	311	312	313
3	319	296	311	319	330	338	344	334	335	336
4	337	332	308	324	334	346	354	361	350	350
5	370	351	346	321	339	350	362	370	377	366
6	361	385	366	360	336	354	366	378	387	394
7	379	378	403	383	379	353	372	384	397	407
8	395	377	376	401	382	378	352	371	383	396
9	379	413	395	394	421	401	397	370	390	403
10	376	388	423	404	405	433	413	408	380	401
11	408	373	385	420	402	403	431	411	406	378
12	341	385	352	364	398	382	382	409	390	386
Tot	**4,458**	**4501**	**4508**	**4551**	**4592**	**4600**	**4628**	**4653**	**4656**	**4681**
Change	49	43	7	43	41	9	27	26	2	25
Percent	1.1%	1.0%	0.2%	0.9%	0.9%	0.2%	0.6%	0.6%	0.1%	0.5%
K-5	1819	1801	1808	1826	1869	1897	1915	1922	1922	1916
6-8	1135	1140	1145	1144	1096	1085	1089	1133	1167	1197
9-12	1503	1560	1555	1581	1626	1619	1623	1598	1566	1568

Projection King County K-12

KC K-12	287,385	291,392	296,628	301,085	304,522	307,537	310,160	311,900	312,573	312,981
Market share	1.55%	1.54%	1.52%	1.51%	1.51%	1.50%	1.49%	1.49%	1.49%	1.50%

High Range Forecast (Growth Rates Based off of the High Range Pop/Housing Forecast)

6 year Trends at Kindergarten			
	Median	**SD+1**	**SD-1**
% County	1.00%	1.04%	0.96%
% City	170%	183%	157%
City % of County	0.62%	0.69%	0.56%

Projected Births

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
City Births	148	156	179	163	153	153	154	154	155	155
Cnty Births	25,032	24,910	25,348	25,487	25,456	25,519	25,593	25,679	25,790	25,911
% County	1.01%	1.04%	1.04%	1.05%	1.02%	1.02%	1.02%	1.02%	1.02%	1.02%
% City	154%	154%	154%	153%	153%	152%	152%	151%	151%	150%

Rollup Ratio Used	*Adjusted for Future Pop/Housing Growth* **2017**	**2018-20**	**2021-26**	**Priv. Schls**
0.97%	1.005	1.010	1.013	1.001
1.109	1.006	1.008	1.012	1.001
1.077	1.006	1.008	1.012	1.001
1.070	1.006	1.008	1.012	1.001
1.041	1.006	1.008	1.012	1.001
1.040	1.006	1.008	1.012	1.001
1.039	1.006	1.008	1.012	1.001
1.045	1.006	1.008	1.012	1.001
0.992	1.006	1.008	1.012	1.001
1.045	1.006	1.008	1.012	1.001
1.022	1.006	1.008	1.012	1.001
0.989	1.006	1.008	1.012	1.001
0.943	1.006	1.008	1.012	1.001

Projections

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**
K	252	260	265	269	260	261	262	263	264	265
1	270	282	291	296	302	293	293	294	295	296
2	277	294	307	316	323	329	319	320	321	322
3	321	299	317	331	342	350	357	346	347	348
4	339	337	315	333	349	361	370	376	365	366
5	372	356	353	330	350	368	380	389	396	384
6	364	390	373	370	347	369	387	400	409	417
7	381	383	411	393	392	367	390	409	423	433
8	397	382	384	412	395	394	369	392	411	425
9	382	419	403	404	436	418	417	391	415	435
10	378	393	432	415	419	451	433	431	404	430
11	410	378	393	431	416	420	452	434	432	405
12	343	390	359	374	412	397	401	432	415	413
Tot	**4,487**	**4563**	**4601**	**4674**	**4744**	**4778**	**4830**	**4878**	**4899**	**4941**
Change	78	76	38	73	70	35	52	48	21	42
Percent	1.8%	1.7%	0.8%	1.6%	1.5%	0.7%	1.1%	1.0%	0.4%	0.9%
K-5	1832	1827	1847	1874	1927	1962	1981	1988	1988	1982
6-8	1142	1155	1168	1175	1134	1130	1146	1201	1244	1276
9-12	1513	1580	1586	1624	1682	1686	1703	1688	1666	1684

Projection King County K-12

KC K-12	287,385	291,392	296,628	301,085	304,522	307,537	310,160	311,900	312,573	312,981
Market share	1.56%	1.57%	1.55%	1.55%	1.56%	1.55%	1.56%	1.56%	1.57%	1.58%

Appendix B

Housing in the Town Center Area

Town Center Housing

The table on the next page shows the Census 2010 data for the Census block areas that most closely encompass the town center or downtown areas of Mercer Island (a rough boundary for this area was provided by District personnel). The number of persons per unit is relatively low compared to the rest of the Island. This is not surprising since there are numerous one-bedroom or fewer units in the residential buildings that make up this area. Based on data from the District that was provided in the last update, there were about 25 students for every 100 units in buildings that were opened by 2012.

The estimate that encompasses all of the units in this area is much lower (see the table). To get this estimate we compared the number of students from this area to the number of units in the 2010 Census block areas that make up downtown. It is important to note that additional units have been built since the Census and the District may not yet have seen all of these students from these buildings. Yet, the number of students per unit is still quite low. We know from previous data that the District can see between 40-60 students per 100 units for buildings with a substantial number of two or three bedroom units. This number is comparable to the average student generation rate that is typical in Puget Sound area for single family homes (about 50 students per 100 units).

The point of all this is to note that greater density in housing will not necessarily produce student growth if that density includes a large number of studio or one bedroom units in multi-family buildings. Based on data from the past decade we can say that the District will see good growth from two or three bedroom units, but we cannot be certain about future building plans and projects in this area.

Town Center Housing Estimates

This table shows the 2010 Census data for the Census block areas that most closely encompass the town center or downtown area of Mercer Island. It is an estimate rather than a precise count, but it gives us some sense of the number of housing units and students that are in this area. These census blocks encompass the areas identified by District maps as "Downtown".

Downtown Census Blocks

SD	SDU	Census Tract	Census Block	Name	Population	Housing Units
04980	5304980	024300	2000	Mercer Island	0	0
04980	5304980	024300	2001	Mercer Island	0	0
04980	5304980	024300	2002	Mercer Island	0	24
04980	5304980	024300	2003	Mercer Island	316	263
04980	5304980	024300	2004	Mercer Island	142	171
04980	5304980	024300	2005	Mercer Island	0	0
04980	5304980	024300	2006	Mercer Island	341	235
04980	5304980	024300	2007	Mercer Island	119	104
04980	5304980	024300	2008	Mercer Island	0	0
04980	5304980	024300	2013	Mercer Island	246	154
04980	5304980	024300	2014	Mercer Island	0	0
04980	5304980	024300	4000	Mercer Island	43	0
04980	5304980	024300	4001	Mercer Island	31	10
04980	5304980	024300	4005	Mercer Island	289	195
04980	5304980	024300	4008	Mercer Island	59	40
04980	5304980	024300	4009	Mercer Island	435	312
04980	5304980	024300	4010	Mercer Island	90	65

	Population	Housing Units	Avg HH Size	2016 Students	K-12 Per Unit
2010 Census	2111	1573	1.34	227	0.14

Appendix C

Census Based Population Forecast

Completed in 2012

Note: This forecast of the resident population in Mercer Island was done for the 2012 forecast update. It is presented here because it is still a valid estimate of the general population and the school age population for 2020. The final page of this appendix provides a demographic profile of the City of Mercer Island based on Census data and data from the American Community Survey (also from the Census)

Age Group Trends in the Census

Another way to look at future enrollment gains is to consider age-group trends in the census. Using data from the 1990, 2000 and 2010 Census it is possible to make some reasonable forecasts of future population growth within the District. To do this we consider the net change in five year age groups from one census to the next for the Mercer Island School District population. For example, the size of the age 20-24 population in 2010 is compared to the size of the age 10-14 population in 2000 to see how much growth or decline occurred over decade. Over the course of the decade some residents in a particular age group will move out, others will move in, and others will stay put, and everyone will be 10 years older. The ratio between the age groups (Age 20-24 in 2010 divided by Age 10-14 in 2000) gives some indication of where there is growth and decline due to movement in and out of the District. The table on the following page shows these trends for Mercer Island.

Using the ratios from the past two census periods it is possible to predict future population growth. The population in a specific age group, say age 10-14, is multiplied by the appropriate change rate to predict the size of the population in ten years (Age 20-24 age group). At the lowest ages (0-4 and 5-9) growth is predicted based on the ratio of children in that age group to women in their child-bearing years using the most recent averages. And at the highest age group (Over 85 years) the population is projected based on the ratio of the 85 and over group to the number of residents ages 75 and above from the previous census. This allows us to account for changes in migration as well as the higher death rates that occur when people age.

Population Trends from the Census
Mercer Island School District Resident Population

Mercer Island School District

Age Group Census Trends

	Male			Females			Totals			Male Rates			Female Rates		
	1990	2000	2010	1990	2000	2010	1990	2000	2010	90-00	00-10	Average	90-00	00-10	Average
0 to 4 yrs	565	530	531	516	475	478	1,081	1,005	1,009						
5 to 9 Yrs	779	840	838	670	905	727	1,449	1,745	1,565						
10-14 yrs	712	975	925	802	835	863	1,514	1,810	1,788	1.73	1.75	1.74	1.62	1.82	1.72
15-19 yrs	689	750	884	635	700	761	1,324	1,450	1,645	0.96	1.05	1.01	1.04	0.84	0.94
20-24	431	305	338	406	285	345	837	590	683	0.43	0.35	0.39	0.36	0.41	0.38
25-29	411	280	408	426	280	405	837	560	813	0.41	0.54	0.48	0.44	0.58	0.51
30-34	593	380	363	643	360	416	1,236	740	779	0.88	1.19	1.04	0.89	1.46	1.17
35-39	783	600	541	957	800	634	1,740	1,400	1,175	1.46	1.93	1.70	1.88	2.26	2.07
40-44	940	1,020	702	1,090	1,095	835	2,030	2,115	1,537	1.72	1.85	1.78	1.70	2.32	2.01
45-49	879	955	918	966	1,060	997	1,845	2,015	1,915	1.22	1.53	1.37	1.11	1.25	1.18
50-54	662	990	965	711	960	1,102	1,373	1,950	2,067	1.05	0.95	1.00	0.88	1.01	0.94
55-59	614	740	898	681	710	921	1,295	1,450	1,819	0.84	0.94	0.89	0.73	0.87	0.80
60-64	632	500	752	619	595	729	1,251	1,095	1,481	0.76	0.76	0.76	0.84	0.76	0.80
65-69	620	355	528	614	440	567	1,234	795	1,095	0.58	0.71	0.65	0.65	0.80	0.72
70-74	393	495	423	376	535	491	769	1,030	914	0.78	0.85	0.81	0.86	0.83	0.84
75-79	216	435	357	305	620	454	521	1,055	811	0.70	1.01	0.85	1.01	1.03	1.02
80-84	91	290	339	164	330	398	255	620	737	0.74	0.68	0.71	0.88	0.74	0.81
85 and over	57	200	336	168	400	530	225	600	866	0.55	0.36	0.46	0.63	0.39	0.51
	10,067	**10,640**	**11,046**	**10,749**	**11,385**	**11,653**	**20,816**	**22,025**	**22,699**						
							Change	**1,209**	**674**						
							Percent Change	**6%**	**3.1%**						
							Annual Percent Change	**0.6%**	**0.3%**						
Women-Child Ratios							*Averages*	*Male*	*Female*						
V 0-4	14.7%	15.9%	16.4%	12.4%	13.5%	14.1%		16.2%	13.8%						
V 5-9	19.3%	23.7%	25.6%	14.9%	23.3%	20.0%		24.7%	21.7%						

Forecast Based on Age-Group Trends

The table on the next page shows a forecast of the resident population of the Mercer Island School District using the trends that occurred by age group between 2000 and 2010. It shows a similar trend as the previous decade and results in a gain of 1,298 residents, including a gain of about 132 residents in the Age 5-19 population. Specifically it shows a big gain in the Age 5-9 population, a smaller gain in the Age 10-14 population, and a net loss in the Age 15-19 population. If we adjust this forecast to the Puget Sound Regional Council forecast, which assumes a population gain of over 2000 residents between 2010 and 2020 we get higher numbers (the adjustment uses a factor applied to every age group to adjust the bottom line total to the higher number). This adjusted forecast shows a net gain of 291 residents in the Age 5-19 group which is a proxy for K-12 growth. Between 2010 and 2016 the District has added 232 students. Assuming the District enrolls another 60-70 students between now and 2020 the enrollment in 2020 will align very closely with the population growth estimates presented here for the Age 5-19 age group.

Forecast of the Mercer Island Resident Population Using Age-Group Trends in the Census

Mercer Island School District

Age Group Census Trends

	Male			Females			Totals			Male Rates			Female Rates				Forecast							
										Rates of Change			Rates of Change				Based on 2000-2010 Change							
	1990	2000	2010	1990	2000	2010	1990	2000	2010	90-00	00-10	Average	90-00	00-10	Average		Project 2020				Adjusted to PSRC	Net Change by Age Group		
																	Males	Females	Total	Forecast		Age group	Forecast	PSRC Adj
0 to 4 yrs	565	530	531	516	475	478	1,081	1,005	1,009							0 to 4 yrs	613	523	1,136	1171		*0 to 4 yrs*	127	162
5 to 9 Yrs	779	840	838	670	905	727	1,449	1,745	1,565							5 to 9 Yrs	980	861	1,841	1898		*5 to 9 Yrs*	276	333
10-14 yrs	712	975	925	802	835	863	1,514	1,810	1,788	1.73	1.75	1.74	1.62	1.82	1.72	10-14 yrs	927	868	1,795	1851		*10-14 yrs*	7	63
15-19 yrs	689	750	884	635	700	761	1,324	1,450	1,645	0.96	1.05	1.01	1.04	0.84	0.94	15-19 yrs	882	611	1,493	1540		*15-19 yrs*	-152	-105
20-24	431	305	338	406	285	345	837	590	683	0.43	0.35	0.39	0.36	0.41	0.38	20-24	321	357	677	698		*20-24*	-6	15
25-29	411	280	408	426	280	405	837	560	813	0.41	0.54	0.48	0.44	0.58	0.51	25-29	481	440	921	950		*25-29*	108	137
30-34	593	380	363	643	360	416	1,236	740	779	0.88	1.19	1.04	0.89	1.46	1.17	30-34	402	504	906	934		*30-34*	127	155
35-39	783	600	541	957	800	634	1,740	1,400	1,175	1.46	1.93	1.70	1.88	2.26	2.07	35-39	788	917	1,705	1758		*35-39*	530	583
40-44	940	1,020	702	1,090	1,095	835	2,030	2,115	1,537	1.72	1.85	1.78	1.70	2.32	2.01	40-44	671	965	1,635	1686		*40-44*	98	149
45-49	879	955	918	966	1,060	997	1,845	2,015	1,915	1.22	1.53	1.37	1.11	1.25	1.18	45-49	828	790	1,618	1668		*45-49*	-297	-247
50-54	662	990	965	711	960	1,102	1,373	1,950	2,067	1.05	0.95	1.00	0.88	1.01	0.94	50-54	664	840	1,504	1551		*50-54*	-563	-516
55-59	614	740	898	681	710	921	1,295	1,450	1,819	0.84	0.94	0.89	0.73	0.87	0.80	55-59	863	866	1,729	1783		*55-59*	-90	-36
60-64	632	500	752	619	595	729	1,251	1,095	1,481	0.76	0.76	0.76	0.84	0.76	0.80	60-64	733	837	1,570	1619		*60-64*	89	138
65-69	620	355	528	614	440	567	1,234	795	1,095	0.58	0.71	0.65	0.65	0.80	0.72	65-69	641	736	1,376	1419		*65-69*	281	324
70-74	393	495	423	376	535	491	769	1,030	914	0.78	0.85	0.81	0.86	0.83	0.84	70-74	636	602	1,238	1276		*70-74*	324	362
75-79	216	435	357	305	620	454	521	1,055	811	0.70	1.01	0.85	1.01	1.03	1.02	75-79	531	585	1,116	1151		*75-79*	305	340
80-84	91	290	339	164	330	398	255	620	737	0.74	0.68	0.71	0.88	0.74	0.81	80-84	290	365	655	675		*80-84*	-82	-62
85 and over	57	200	336	168	400	530	225	600	866	0.55	0.36	0.46	0.63	0.39	0.51	85 and over	375	705	1,080	1114		*85 and over*	214	248
	10,067	**10,640**	**11,046**	**10,749**	**11,385**	**11,653**	**20,816**	**22,025**	**22,699**								**11,625**	**12,372**	**23,997**	**24,742**		*Net Change*	**1,298**	**2,043**
							Change	**1,209**	**674**									*Change*	**1,298**	**2043**				
							Percent Change	**6%**	**3.1%**									*Percent Change*	**5.7%**	**9%**				
							Annual Percent Change	**0.6%**	**0.3%**									*Annual Percent Change*	**0.6%**	**0.9%**				

City of Mercer Island Demographic Information

		Source
Population	22,699	2010 Census
Population 2016	23,660	Office of Financial Management State of Washington
Median Age	45.3	2011-2015 Estimate American Community Survey
Education (High School or Higher)	97.8%	2011-2015 Estimate American Community Survey
Housing Units	9,930	2010 Census (Includes Vacant Homes)
Median Household Income	126,106	2011-2015 Estimate American Community Survey
Foreign Born Population	4,221	2011-2015 Estimate American Community Survey
Individuals Below Poverty Level	4.5%	2011-2015 Estimate American Community Survey
Race and Hispanic Origin		
White	18,507	2011-2015 Estimate American Community Survey
Black or African American Alone	439	2011-2015 Estimate American Community Survey
American Indian Alaska Native	18	2011-2015 Estimate American Community Survey
Asian	4,199	2011-2015 Estimate American Community Survey
Native Hawaiian/Pacific Islander	50	2011-2015 Estimate American Community Survey
Other Race	59	2011-2015 Estimate American Community Survey
Two or More Races	848	2011-2015 Estimate American Community Survey
Hispanic/Latino (Any Race)	762	2011-2015 Estimate American Community Survey
White (Not Hispanic/Latino)	17,909	2011-2015 Estimate American Community Survey
Veterans	1,469	2011-2015 Estimate American Community Survey

American Community Survey Language Information

Population 5 years and over	22,992	2011-2015 Estimate American Community Survey
Speak only English	18,990	2011-2015 Estimate American Community Survey
Speak a language other than English	4,002	2011-2015 Estimate American Community Survey
SPEAK A LANGUAGE OTHER THAN ENGLISH		
Spanish	401	2011-2015 Estimate American Community Survey
5 to 17 years old	54	2011-2015 Estimate American Community Survey
18 to 64 years old	321	2011-2015 Estimate American Community Survey
65 years old and over	26	2011-2015 Estimate American Community Survey
Other Indo-European languages	1,471	2011-2015 Estimate American Community Survey
5 to 17 years old	281	2011-2015 Estimate American Community Survey
18 to 64 years old	909	2011-2015 Estimate American Community Survey
65 years old and over	281	2011-2015 Estimate American Community Survey
Asian and Pacific Island languages	1,936	2011-2015 Estimate American Community Survey
5 to 17 years old	351	2011-2015 Estimate American Community Survey
18 to 64 years old	1,184	2011-2015 Estimate American Community Survey
65 years old and over	401	2011-2015 Estimate American Community Survey
Other languages	194	2011-2015 Estimate American Community Survey
5 to 17 years old	38	2011-2015 Estimate American Community Survey
18 to 64 years old	156	2011-2015 Estimate American Community Survey
65 years old and over	0	2011-2015 Estimate American Community Survey

* The American Community Survey is conducted in the years between Census Years. The results are estimates based on a survey of the population. They are NOT precise Census counts.

Appendix D

Data from District Surveys and the Student Data System

Summary of Information Collected by the Mercer Island School District

	2007-08	2011-12	2015-16
Non-Resident Students	59	154	97
Moved Out of District	104	152	161
Transferred to Private School	37	40	54
Transferred to Home School	8	5	6
MI Students Attending Other Districts	22	41	14
MI Students Enrolled in Private School	519	468	400

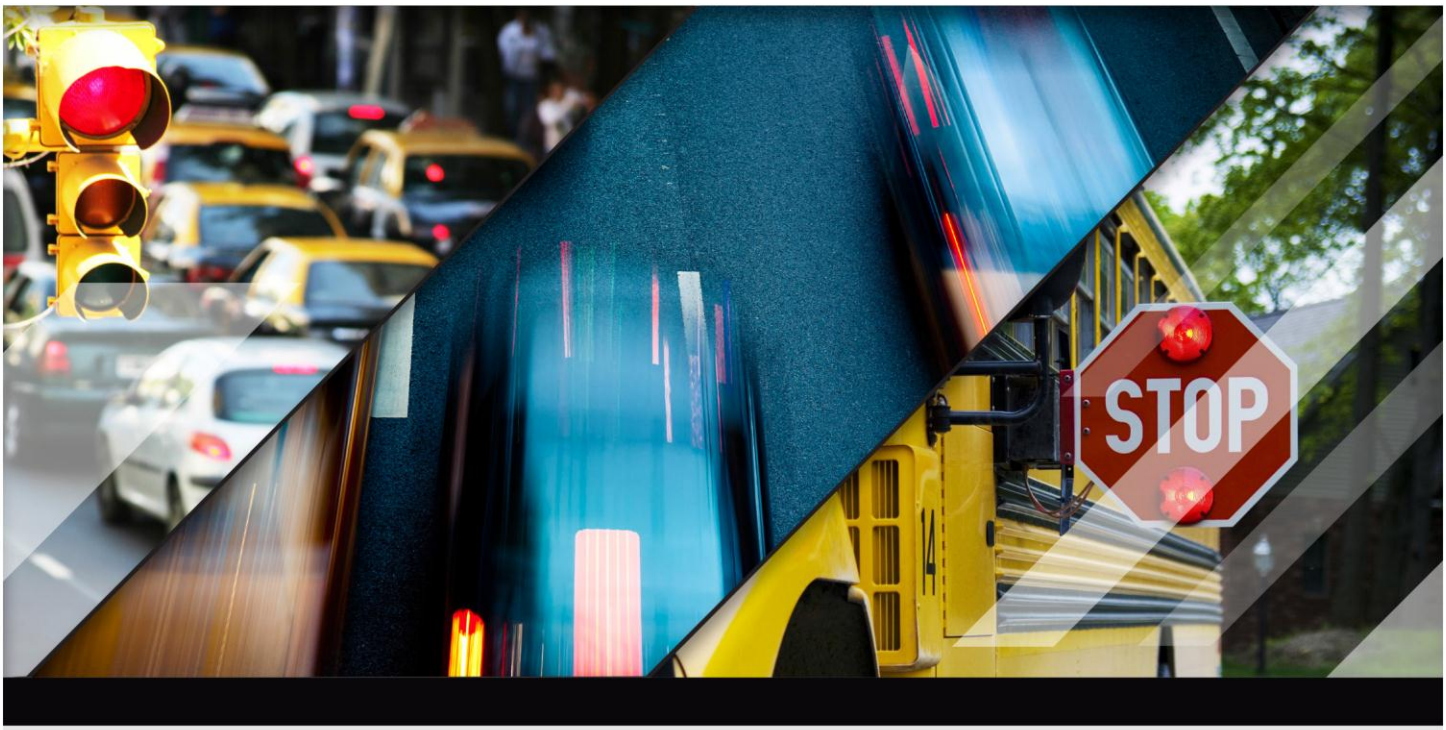
Consultant Background and Experience

Dr. Kendrick was the demographer for the Seattle Public schools from 1990 to 1997. In that capacity he provided enrollment projections to facilitate staffing and facilities planning and helped with the management of the student assignment system He also provided analysis of the relationship between demographics and test scores.

Since 1997 he has worked as a consultant providing demographic analysis and enrollment projections for local school districts. Over the past 20 years his clients have included the following Districts: Auburn, Bainbridge Island, Bellingham, Bellevue, Bethel, Bremerton, Central Kitsap, Edmonds, Enumclaw, Federal Way, Marysville, Mercer Island, Monroe, North Kitsap, Olympia, Renton, Seattle, South Kitsap, Shoreline, Snoqualmie Valley, Sumner, and Tukwila. He also does annual enrollment projection work for the Everett, Highline, Mukilteo, Northshore, Puyallup, and Tacoma School Districts. He has worked in all four counties of the Puget Sound and is familiar with the different trends and patterns across the region.

CrossingGuard Program Analysis

Mercer Island School District, Washington



JANUARY 2017

SUBMITTED BY AMERICAN TRAFFIC SOLUTIONS, INC.

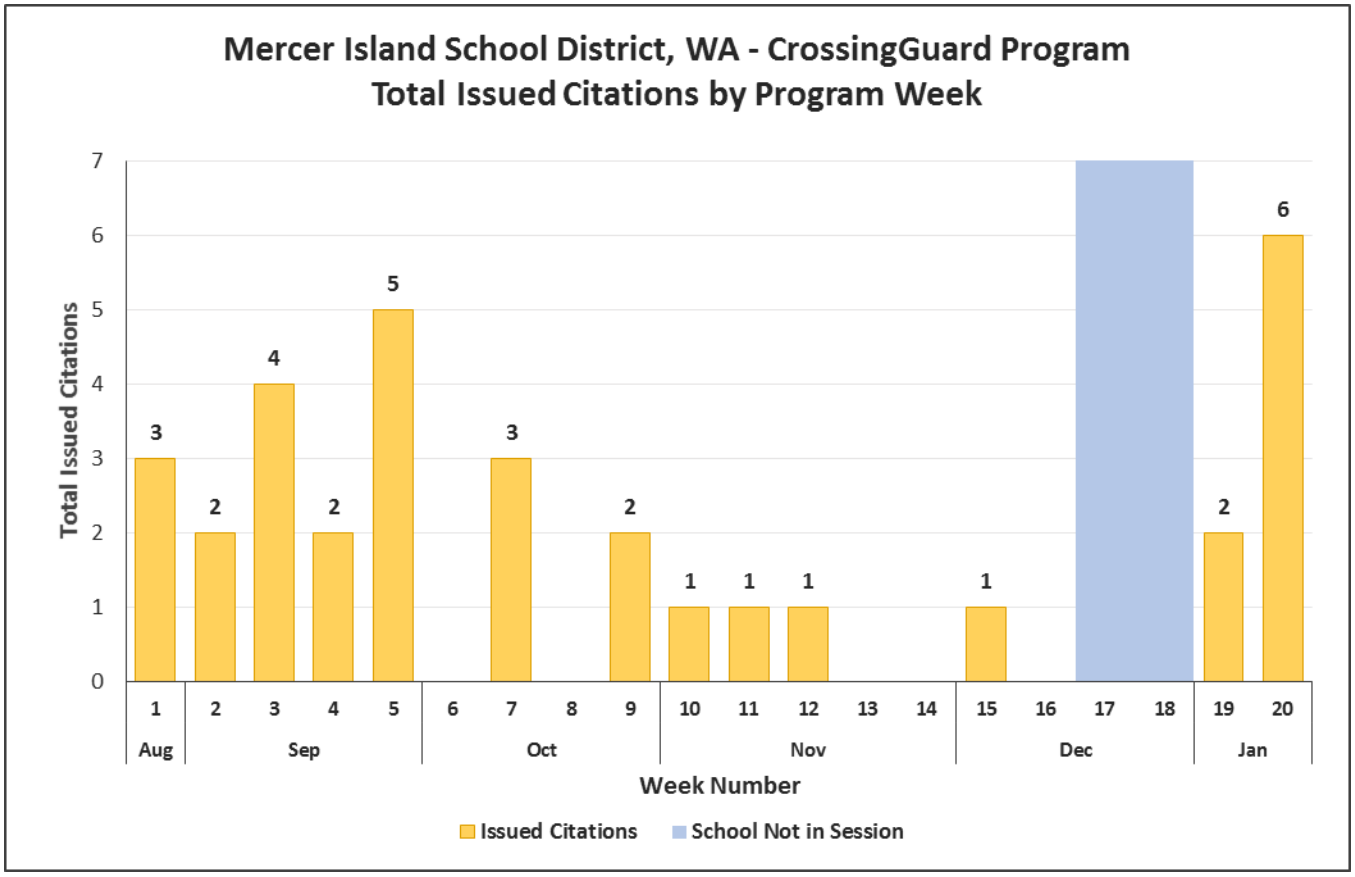
ATS American Traffic Solutions™

Contents

1. PROGRAM OVERVIEW

1.1 Total Citations

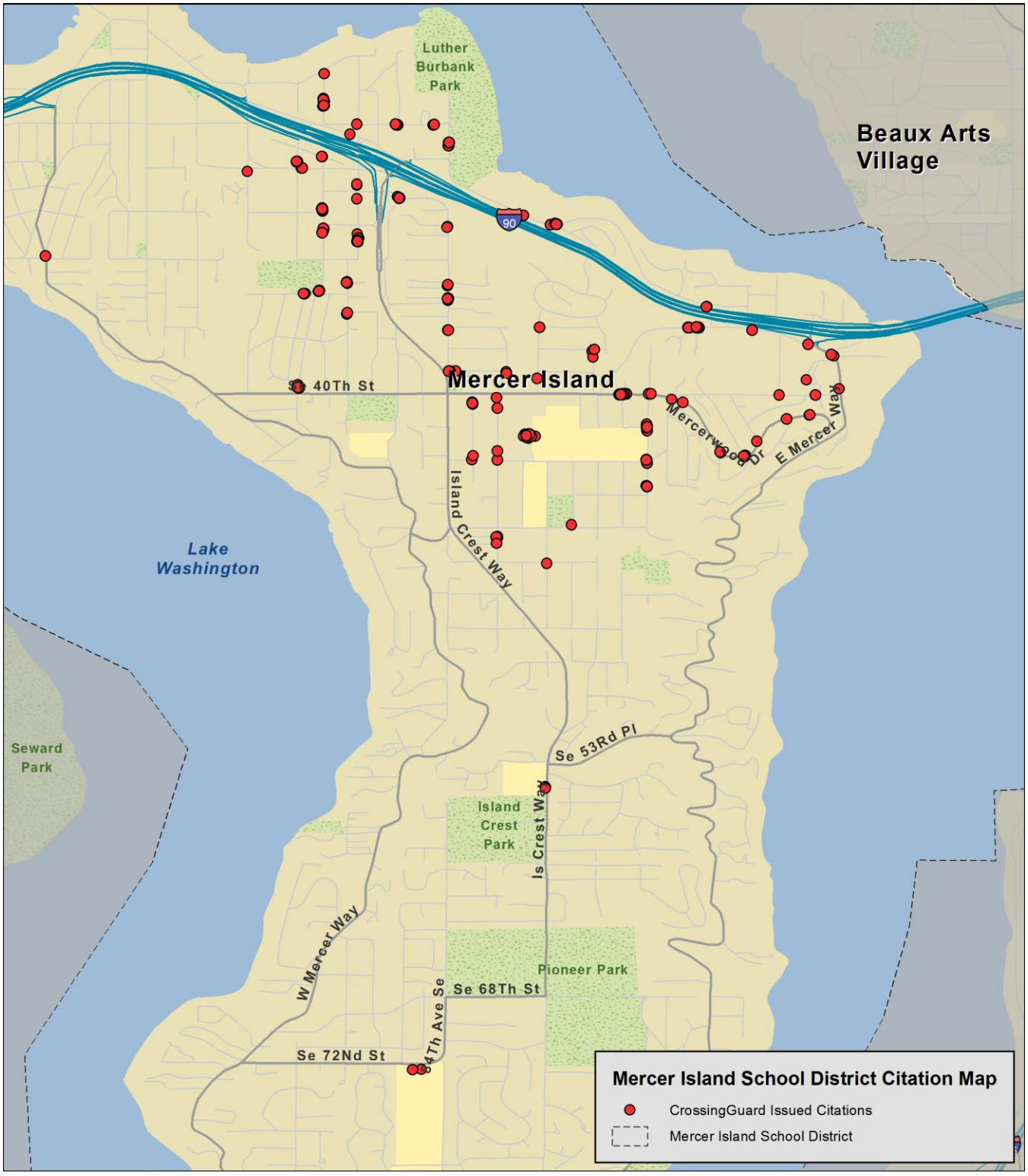
The Mercer Island School District's CrossingGuard program began on August 31st, 2016, and has since issued 33 stop arm citations in 85 active school days with 5 buses. This equates to an average of 0.39 citations per school day and 0.15 citations per equipped school bus per school day.



Mercer Island School District, WA - Issued Citations by Program Month							
	2016					2017	Total
Month:	Aug	Sep	Oct	Nov	Dec	Jan	
Total Issued Citations	1	15	5	3	1	8	**33**
Number of Active School Days Per Month	1	21	21	19	12	11	**85**
Average Issued Citations Per School Day	1.0	0.7	0.2	0.2	0.1	0.7	**0.39**
Average Issued Citations Per Bus Per School Day	0.2	0.2	0.1	0.1	0.0	0.3	**0.15**

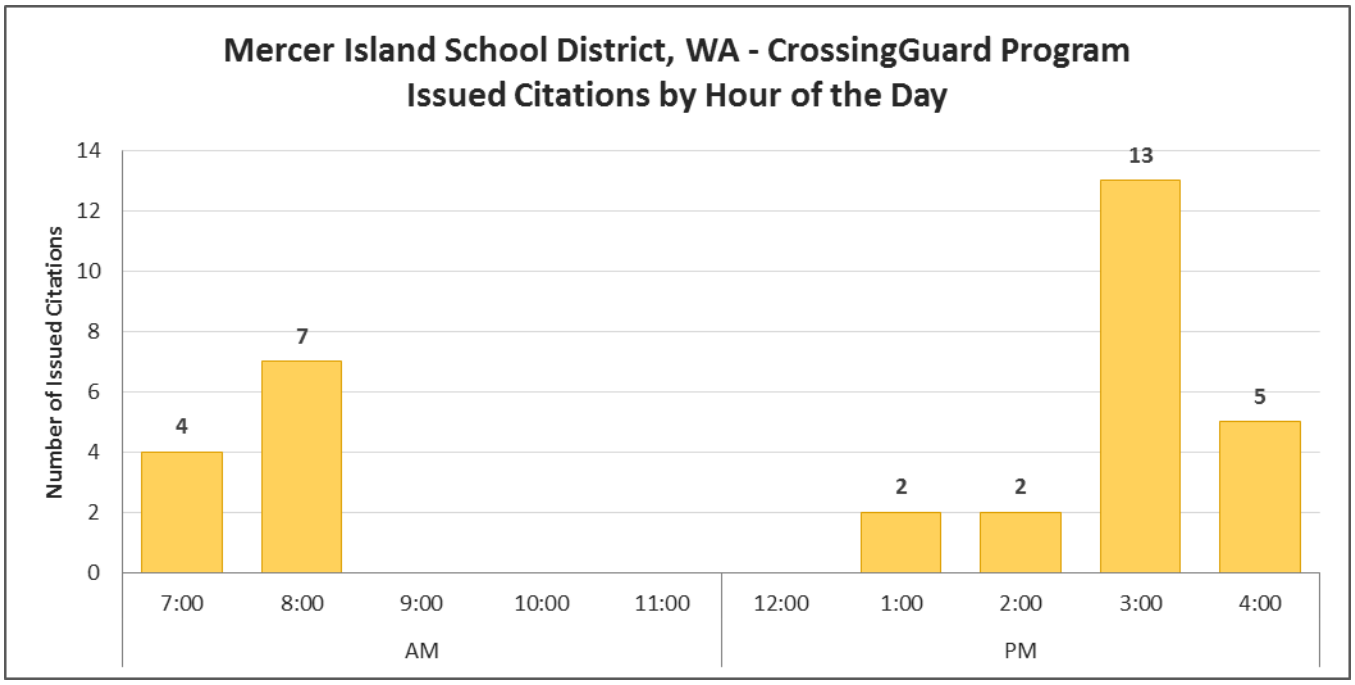
1.2 Citations by Location

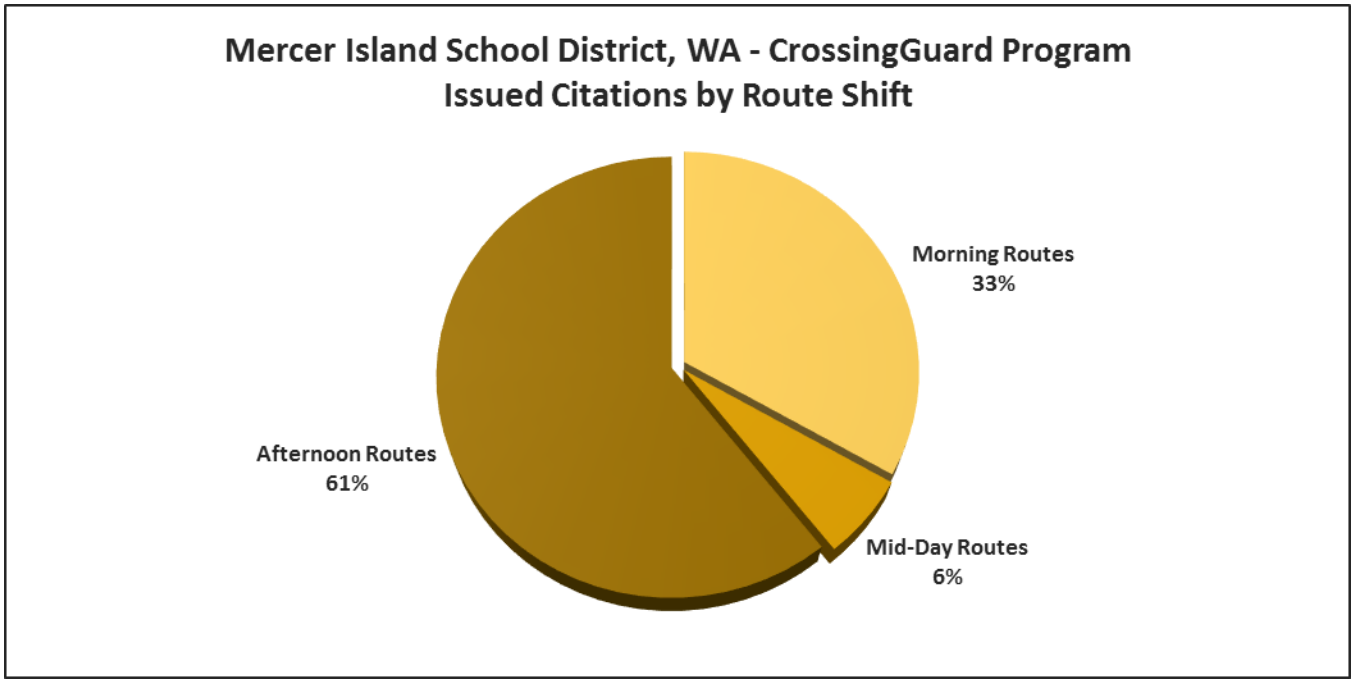
The following map shows the unique locations where school bus stop arm citations were issued within Mercer Island School District.



1.3 Citations by Time of Day

Of the total citations issued since the start of program, approximately 39 percent occurred between the hours of 3:00 PM and 4:00 PM. Approximately 33 percent of the total citations occurred during the AM bus routes and approximately 61 percent occurred during the PM bus routes.

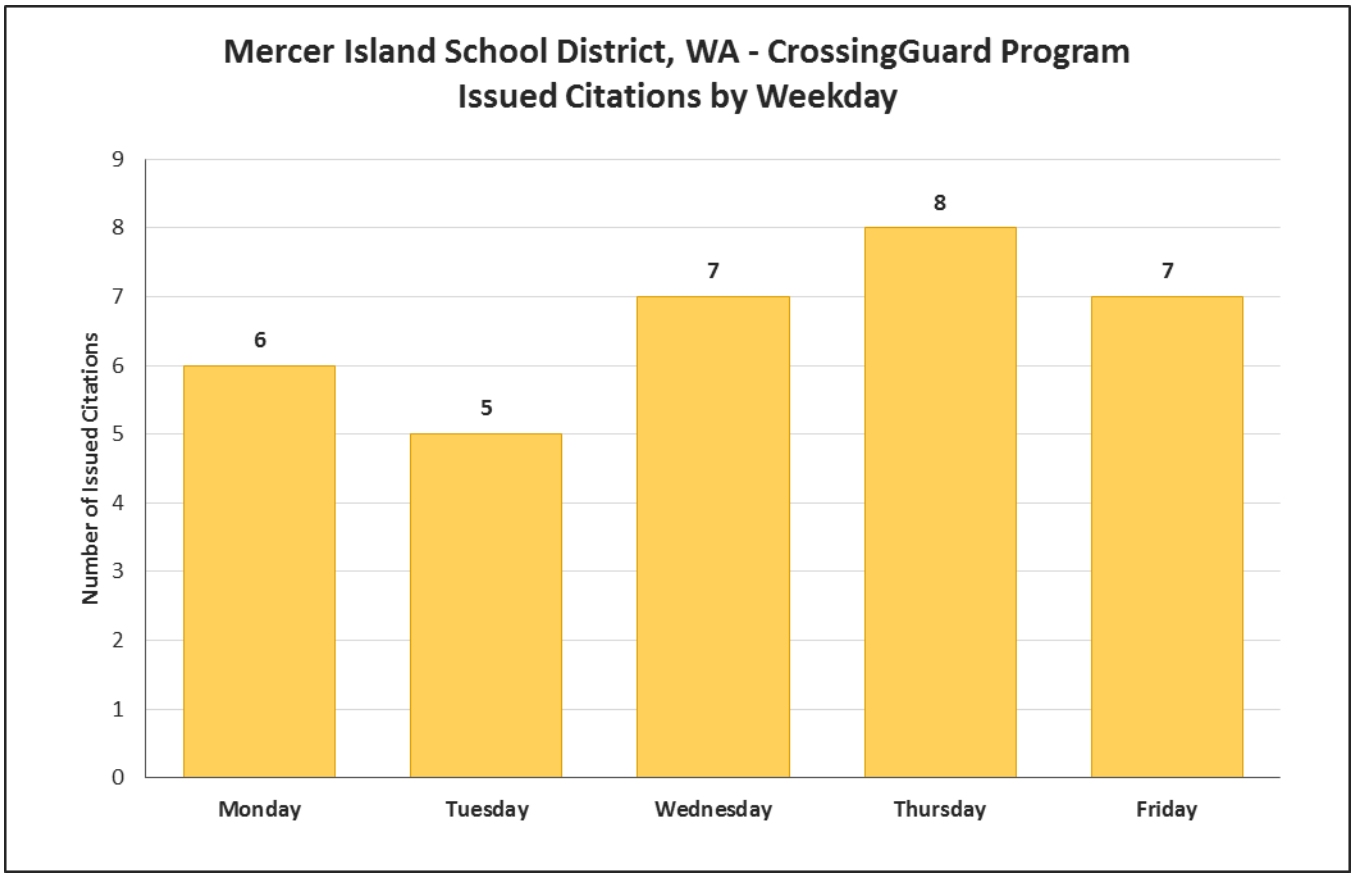




*Morning routes are prior to 10:00 AM, mid-day routes are from 10:00 AM – 2:00 PM, afternoon routes are after 2:00 PM.

1.4 Citations by Day of the Week

When looking at the total number of citations by day of the week, the day with the most citations is Thursday accounting for 24 percent of all citations.



Day of the Week	Issued Citations	Number of School Days	Issued Citations Per School Day
Monday	6	15	0.4
Tuesday	5	18	0.3
Wednesday	7	19	0.4
Thursday	8	17	0.5
Friday	7	16	0.4