WHITE RIVER SCHOOL DISTRICT NO. 416
Buckley, Washington

RESOLUTION NO. 18/13

WHEREAS, White River School District (the "District") serves students in unincorporated Pierce County and within the municipal boundaries of Buckley, Sumner and Bonney Lake; and

WHEREAS, by ordinance Pierce County and the cities of Buckley, Sumner and Bonney Lake authorize the District to collect school impact fees under each individual jurisdiction's ordinance requirements; and

WHEREAS, the District has experienced enrollment growth and anticipates future enrollment growth for which the District lacks sufficient facilities to serve its students; and

WHEREAS, the Board finds that is appropriate to update the District's Capital Facilities Plan, to seek incorporation of the updated Capital Facilities Plan into the capital facilities plans of Pierce County, Buckley, Sumner and Bonney Lake, and thereafter collect school impact fees from each such jurisdiction,

NOW, THEREFORE, be it resolved the Board of Directors hereby adopts the 2018 – 2024 Capital Facilities Plan attached hereto as Exhibit A.

PASSED AND ADOPTED BY THE WHITE RIVER SCHOOL DISTRICT BOARD OF DIRECTORS this 25th day of July, 2018.

BOARD OF DIRECTORS

ATTEST:

for Janel Keating-Hambly
Secretary to the Board

WHITE RIVER SCHOOL DISTRICT
CAPITAL FACILITIES PLAN
2018 – 2024

WHITE RIVER SCHOOL DISTRICT BOARD OF DIRECTORS
Denise Vogel- Board President
Cassie Pearson- Board Vice President
Mike Jansen - Director
Matt Sheer - Director
Tawny Sanabria - Director

Janel Keating - Superintendent

SECTION 1
INTRODUCTION AND SUMMARY

A. Introduction

The Washington State Growth Management Act (the "GMA") includes schools in the category of public facilities and services. School districts are required by Pierce County ("County") to adopt capital facilities plans at least every four years to satisfy the requirements of the GMA and to identify additional school facilities necessary to meet the educational needs of projected enrollment growth for a six-year period.

The White River School District ("District") has prepared the 2018 Capital Facilities Plan ("CFP") to provide the County with a schedule and financing program for capital improvements over the next six years (**Oct. 1, 2018 through Oct. 1, 2024**) to maintain a 6-year adoption cycle. The 2018 CFP includes the following elements:

- The District's standard of service (Section 2)
- An inventory of existing capital facilities owned by the District, including functional capacities and locations (Section 3)
- Future enrollment projections for each grade span (elementary, middle, and high schools) (Section 4)
- A forecast of future needs for capital facilities and school sites, including proposed capacities of expanded or new capital facilities and a six-year plan for financing capital facilities within projected funding capacities, which identifies sources of money for such purposes. The financing plan separates projects and portions of projects which add capacity from those which do not, since the latter are generally not appropriate for impact fee funding (Section 5)
- A calculation of impact fees based on the formula in the County impact fee ordinances and supporting data substantiating such fees (Section 6)

B. Summary

White River is a financially and academically sound school district. The White River School District has four "categories" of school organizational types: (1) four K-5 elementary schools, (2) one grade 6-8 middle school, and (3) one grade 9-12 high school. The District serves residents from the City of Buckley, the City of Bonney Lake, and unincorporated rural Pierce County. It is bordered by Carbonado and Eatonville School Districts to the south, Naches Valley and Thorp School Districts to the east, the Enumclaw and Dieringer School Districts to the north, and the Orting and Sumner School Districts to the east.

The overall October 1, 2017 enrollment (head count) for the District was **3,757** students. Of the total enrollment, **1,804** were elementary students, **812** were middle school students, and **1,141** were high school students.

School facility and student capacity needs are dictated by a complex matrix of regulatory mandates, educational program components, collective bargaining agreements, and community expectations, more fully described in Section 2. The District's existing capital facilities are summarized in Section 3. In addition, the district owns **31** portable classrooms used for educational purposes and located at school facilities.

Much of the land within district and urban growth boundaries has yet to be developed, and there continues to be market interest in housing development in Buckley, Bonney Lake, and the unincorporated areas of the County. Future elementary enrollment is projected to increase by **146** students over the next 6 years, the middle school is expecting to increase by **264** students, and the high school by **238** students. The projected number of students minus current capacity equals a projected capacity need for **344** elementary school students, **264** middle school students, and **238** high school students by the 2024-25 school year.

Maximum impact fees are calculated in Section 6.

SECTION 2
DISTRICT EDUCATIONAL PROGRAMS AND STANDARD OF SERVICE

School facility and student capacity needs are dictated by the types and amounts of space required to accommodate the District's educational program. The educational program components which drive facility space needs include grade configuration, optimum facility size, class size, educational program offerings, classroom utilization and scheduling requirements, and use of modular classrooms (portables).

In addition to student population, other factors such as collective bargaining agreements, government mandates, and community expectations also affect classroom space requirements. In addition to basic education programs, other programs such as special education, bilingual education, pre-school, and art and music must be accommodated. These programs can have a significant impact on the available student capacity of school facilities.

The District educational program guidelines, which directly affect school capacity are outlined below for elementary, middle, and high school grade levels.

- **Elementary Schools**: Average class size for elementary classrooms is estimated at **21 students**. The actual number of students in an individual classroom depends on the above factors. Elementary school capacity is calculated utilizing only classroom spaces containing a basic education teacher and his/her complement of students. Students may be pulled out to attend additional programs (which may also be held in classrooms, if there is no designated space available). Working building capacity calculations do not include classrooms used for these special programs, such as resource rooms, learning support centers, and computer labs. Self-contained special education classrooms have an estimated capacity of **8 students**.

- **Middle Schools**: Average class size for middle school classrooms is estimated at **25 students**. The actual number of students in an individual classroom depends on the above factors. Middle school capacity is calculated utilizing the number of basic education teaching stations and applying a scheduling/utilization factor of 83%. Working building capacity calculations consider reduced classroom sizes for remedial programs. Self-contained special education classrooms have an estimated capacity of **8 students**.

- **High Schools**: Average class size for high school classrooms is estimated at **25 students**. The actual number of students in an individual classroom depends on the above factors. High school capacity is calculated utilizing the number of basic education teaching stations and applying a scheduling/utilization factor of 83%. Working building capacity calculations consider reduced classroom sizes for remedial programs. Self-contained special education classrooms have an estimated capacity of **8 students**.

SECTION 3
CAPITAL FACILITIES INVENTORY

This section provides a summary of capital facilities owned and operated by the District including schools, portable classrooms, undeveloped land, and support facilities. Refer to **Appendix "C"** for individual school capacity calculations.

A. Elementary Schools

Elementary School	Location	Year of Occupancy	Area	Capacity
Elk Ridge (K-5)	340 River Road Buckley WA 98321	2019*	78,616	527
Foothills (K-5)	10621 234th Ave E Buckley WA 98321	1989	56,303	450
Mountain Meadows (K-5)	11812 Mundy Loss Rd. Buckley WA 98321	1991	47,940	355
Wilkeson (K-5)	640 Railroad Ave Wilkeson WA 98396	2018*	41,302	273
Early Learning Center (K)	27515 120th Ave E Buckley WA 98321	2018	8,908	95
Totals			**233,069**	**1,606**

* Currently under construction

B. Middle Schools

Middle School	Location	Year of Occupancy	Area	Capacity
Glacier	240 North C Street Buckley WA 98321	2019*	147,610	885
Totals			**147,610**	**885**

* Currently under construction

C. High Schools

High School	Location	Year of Occupancy	Area	Capacity
White River High (9-12)	26928 120th St. E. Buckley WA 98321	2003	230,584	1,331
Totals			**230,584**	**1,331**

D. Portables Inventory

Facility Type	No. of Portable Classrooms	No. of Portable Classrooms used as Interim Teaching Stations	Interim Capacity
Elementary Schools	23	13	0*
Middle Schools	19	19	473
High Schools	0	0	0
TOTALS:	**42**	**32**	**473**

** The 13 elementary teaching stations are devoted to special programs. Since they are "pull-out" programs and the students are assigned to a home room, these 13 portables have no capacity but play a vital role in the special services programs of the elementary schools.*

E. Auxiliary Property

Type	Location
District Administration Office	240 North A Street Buckley WA 98321
Transportation Center	28233 Hwy 410 East, Buckley, WA 98321
Maintenance Shop	28233 Hwy 410 East, Buckley, WA 98321
Wickersham Community Center	250 West Main, Buckley, WA 98321
White River Educational Service Center	27515 120th St. East, Buckley, WA 98321

F. Land Inventory

The district owns the following underdeveloped/undeveloped sites:

- 234th Avenue – Portion of W ½ of W ½, Section 23, Township 20 North, Range 5 East, W.M., Pierce County, WA containing 75 +/- acres. This parcel consists of approximately 30 acres of predominately reproduction Douglas fir, 30 acres of premature Douglas-fir and approximately 15 acres of non-stocked field. This site is designated by the District as the location for a possible future educational facility.

SECTION 4
STUDENT ENROLLMENT PROJECTIONS

The District enrollment forecast was most recently updated by Educational Data Solutions, LLC in January 2018, a copy of which is included in **Appendix "D"**.

A. Projected Enrollment October 2018 – October 2024 (Headcount)

Grade	Oct '18	Oct '19	Oct '20	Oct '21	Oct '22	Oct '23	Oct '24
K-5	1,929	2,015	2,017	2,079	2,087	2,092	2,101
6-8	840	907	1,005	1,057	1,121	1,121	1,176
9-12	1,160	1,177	1,210	1,237	1,294	1,435	1,485
Totals	**3,929**	**4,099**	**4,232**	**4,373**	**4,502**	**4,648**	**4,762**

SECTION 5
CAPITAL FACILITY NEEDS

Projected facility capacity is derived by subtracting the projected student enrollment from the school facility capacity. The resulting deficit is used to determine facility needs.

A. Projected Facility Capacity Needs

	Oct '18	Oct '19	Oct '20	Oct '21	Oct '22	Oct '23	Oct '24
Elk Ridge Elementary							
Capacity	527	527	527	527	527	527	527
Projected Enrollment	453	472	493	491	490	493	501
Capacity Surplus (Deficit)	74	55	34	36	37	34	26
Foothills Elementary							
Capacity	450	450	450	450	450	450	450
Projected Enrollment	607	632	625	648	664	654	663
Capacity Surplus (Deficit)	(157)	(182)	(175)	(198)	(214)	(204)	(213)
Mountain Meadows Elementary							
Capacity	355	355	355	355	355	355	355
Projected Enrollment	442	452	434	456	450	461	465
Capacity Surplus (Deficit)	(87)	(97)	(79)	(101)	(95)	(106)	(110)
Wilkeson Elementary							
Capacity	273	273	273	273	273	273	273
Projected Enrollment	301	315	313	321	316	317	320
Capacity Surplus (Deficit)	(28)	(42)	(40)	(48)	(43)	(44)	(48)
Early Learning Center							
Capacity	95	95	95	95	95	95	95
Projected Enrollment	95	95	95	95	95	95	95
Capacity Surplus (Deficit)	0	0	0	0	0	0	-
Subtotal Elementary	(198)	(266)	(260)	(311)	(315)	(320)	(344)
Glacier Middle School							
Capacity	885	885	885	885	885	885	885
Projected Enrollment	827	885	971	1,012	1,062	1,050	1,091
Capacity Surplus (Deficit)	58	(0)	(86)	(127)	(177)	(165)	(206)
High School							
Capacity	1,331	1,331	1,331	1,331	1,331	1,331	1,331
Projected Enrollment	1,142	1,148	1,169	1,184	1,226	1,346	1,380
Capacity Surplus (Deficit)	189	183	162	147	105	(15)	(49)
District Total	49	(83)	(184)	(291)	(387)	(500)	(599)

B. 6-Year Plan – Facility Capacity Needs

Project Description	Added Capacity	Added Capacity to Serve Growth	Estimated Project Cost (2018 $)	Cost for Added Capacity to Serve Growth
New Elementary School	500	344	$33,718,750	$23,192,000
Middle School Addition	300	206	$25,468,750	$17,514,000
High School Addition	100	49	$11,784,375	$5,776,000

Refer to **Appendix "C"** for construction cost estimates.

C. Six-Year Financing Plan

Funding Status	Total	Estimated Impact Fees	Estimated State Funding Assistance	Bonds
Secured	$0	$0	$0	$0
Unsecured	$70,971,875	$500,000	$0	$70,471,875

General Obligation Bonds
Bonds are used to fund site acquisition, construction of new schools, and other capital improvement projects. A 60% majority vote is required to approve the issuance of bonds. Bonds are then retired through collection of property taxes.

School Construction Assistance Program Funding (SCAP)
SCAP funds primarily come from the Common School Construction Fund (the "Fund"). School districts may qualify for SCAP funds for specific capital projects based on eligibility requirements and a state prioritization system. Based on the District's assessed valuation per student, and the formula in the state regulations, the District is currently eligible for SCAP funds for new schools at the 60.18% of eligible costs level if, and only if, there is "unhoused" eligibility as defined by the state. At this writing, the District does not have any "unhoused" eligibility.

Impact Fees
The collection of school impact fees generates partial funding for construction of public facilities needed to accommodate new development. School impact fees are collected by the County on behalf of the District. Impact fees are calculated based on a formula, which includes the portion of District construction resulting in increased capacity in schools.

SECTION 6
SCHOOL IMPACT FEES

The Growth Management Act (GMA) authorizes local jurisdictions to collect impact fees to supplement funding of additional public facilities needed to accommodate new development.

Local jurisdictions in Pierce County have adopted impact fee programs that require school districts to prepare and adopt Capital Facilities Plans. Impact fees are calculated in accordance with the jurisdiction's formula, which is based on school facility costs to serve new growth.

The District's impact fees have been calculated utilizing the formula in the Pierce County Impact Fee Ordinances. The resulting figures, in **Appendix A** and the paragraph below, are based on the District's cost per dwelling unit to build the new facilities which add capacity that is needed to serve new development. Credits have also been applied in the formula to account for state funding assistance the District receives and projected future property taxes that will be paid by the owner of the dwelling unit.

The calculated maximum allowable impact fees are:

- **$11,390.54 per single family residence**
- **$4,000.76 per multi-family residence**

APPENDIX "A"
SCHOOL IMPACT FEES CALCULATIONS

SINGLE-FAMILY IMPACT FEE CALCULATIONS (WHITE RIVER)					
SITE ACQUISITION COSTS (A)	**COST PER ACRE**	**NUMBER OF ACRES**	**NUMBER OF STUDENTS ATTRIBUTED TO PROJECTED GROWTH**	**STUDENT FACTOR**	**TOTAL COST**
New Elementary School (500 Capacity)	$ 350,000	10	344	0.275	$ 2,798.78
Middle School Addition (300 Capacity)	$ 350,000	6	206	0.130	$ 1,323.30
Senior High School Addition (100 Capacity)	$ 350,000	2	49	0.080	$ 1,142.58
Total					**$ 5,264.65**

CONSTRUCTION COSTS (B)	**FACILITY COST TO SERVE PROJECTED GROWTH**		**STUDENTS ATTRIBUTED TO PROJECTED GROWTH**	**STUDENT FACTOR**	**TOTAL COST**
New Elementary School (500 Capacity)	$ 23,191,756		344	0.275	$ 18,545.31
Middle School Addition (300 Capacity)	$ 17,514,265		206	0.130	$ 11,036.46
Senior High School Addition (100 Capacity)	$ 5,775,758		49	0.080	$ 9,427.50
Total					**$ 39,009.27**

TEMPORARY FACILITY COSTS (C)	**PURCHASING COST TO SERVE PROJECTED GROWTH**		**NUMBER OF STUDENTS ATTRIBUTED TO PROJECTED GROWTH**	**STUDENT FACTOR**	**TOTAL COST**
New Elementary School (500 Capacity)	$0		344	0.275	$0
Middle School Addition (300 Capacity)	$0		206	0.130	$0
Senior High School Addition (100 Capacity)	$0		49	0.080	$0
Total					$0

STATE MATCHING CREDIT (D)	**BOECKH INDEX**	**SQ FT PER STUDENT**	**STATE MATCH PERCENTAGE**	**STUDENT FACTOR**	**TOTAL COST**
New Elementary School (500 Capacity)	$ 225.97	90	0.6235	0.275	$ 3,487.08
Middle School Addition (300 Capacity)	$ 225.97	117	0.6235	0.130	$ 2,142.97
Senior High School Addition (100 Capacity)	$ 225.97	130	0.6235	0.080	$ 1,465.28
Total					**$ 7,095.34**

	PRESENT VALUE FACTOR	**BOND LEVY RATE PER $1,000**	**AVERAGE ASSESSED VALUE OF UNIT**	**BOND INTEREST RATE**	**TOTAL CREDIT**
TAX PAYMENT CREDIT (TC)	18.10	$ 2.14	$ 371,800	5.00%	$ 14,397.51
NET COST (A+B+C-D)-TC					$ 22,781.07
DISCOUNT @ 50%, IMPACT FEE PER UNIT (NET COST-TC) X (DISCOUNT RATE)					$ 11,390.54
LESS OTHER CREDITS (FC)					$0
NET IMPACT FEE PER UNIT					**$ 11,390.54**

MULTI-FAMILY IMPACT FEE CALCULATIONS (WHITE RIVER)					
SITE ACQUISITION COSTS (A)	**COST PER ACRE**	**NUMBER OF ACRES**	**NUMBER OF STUDENTS ATTRIBUTED TO PROJECTED GROWTH**	**STUDENT FACTOR**	**TOTAL COST**
New Elementary School (500 Capacity)	$ 350,000	10	344	0.139	$ 1,411.26
Middle School Addition (300 Capacity)	$ 350,000	6	206	0.054	$ 549.68
Senior High School Addition (100 Capacity)	$ 350,000	2	49	0.057	$ 814.09
Total					**$ 2,775.03**

CONSTRUCTION COSTS (B)	**FACILITY COST TO SERVE PROJECTED GROWTH**		**STUDENTS ATTRIBUTED TO PROJECTED GROWTH**	**STUDENT FACTOR**	**TOTAL COST**
New Elementary School (500 Capacity)	$ 23,191,756		344	0.139	$ 9,351.33
Middle School Addition (300 Capacity)	$ 17,514,265		206	0.054	$ 4,584.38
Senior High School Addition (100 Capacity)	$ 5,775,758		49	0.057	$ 6,717.09
Total					**$ 20,652.80**

TEMPORARY FACILITY COSTS (C)	**PURCHASING COST TO SERVE PROJECTED GROWTH**		**NUMBER OF STUDENTS ATTRIBUTED TO PROJECTED GROWTH**	**STUDENT FACTOR**	**TOTAL COST**
New Elementary School (500 Capacity)	$0		344	0.139	$0
Middle School Addition (300 Capacity)	$0		206	0.054	$0
Senior High School Addition (100 Capacity)	$0		49	0.057	$0
Total					$0

STATE MATCHING CREDIT (D)	**BOECKH INDEX**	**SQ FT PER STUDENT**	**STATE MATCH PERCENTAGE**	**STUDENT FACTOR**	**TOTAL COST**
New Elementary School (500 Capacity)	$ 225.97	90	0.6235	0.139	$ 1,758.34
Middle School Addition (300 Capacity)	$ 225.97	117	0.6235	0.054	$ 890.16
Senior High School Addition (100 Capacity)	$ 225.97	130	0.6235	0.057	$ 1,044.01
Total					**$ 3,692.51**

	PRESENT VALUE FACTOR	**BOND LEVY RATE PER $1,000**	**AVERAGE ASSESSED VALUE OF UNIT**	**BOND INTEREST RATE**	**TOTAL CREDIT**
TAX PAYMENT CREDIT (TC)	18.10	$ 2.14	$ 303,013	5.00%	$ 11,733.80
NET COST (A+B+C-D)-TC					$ 8,001.52
DISCOUNT @ 50%, IMPACT FEE PER UNIT (NET COST-TC) X (DISCOUNT RATE)					$ 4,000.76
LESS OTHER CREDITS (FC)					$0
NET IMPACT FEE PER UNIT					**$ 4,000.76**

Student Generation Rates by Grade

7-May-18

Total Single Family Permits:		400		
Grade	Students Generated	Generation Rate	Rate by Level	
P2/P3/P4	10	0.025	K-5	0.275
K1	21	0.053	6-8	0.130
01	14	0.035	9-12	0.080
02	22	0.055	**Total**	**0.485**
03	25	0.063		
04	16	0.040		
05	12	0.030		
06	25	0.063		
07	13	0.033		
08	14	0.035		
09	7	0.018		
10	10	0.025		
11	8	0.020		
12	7	0.018		
Totals	**204**	**0.510**		

Pierce County Sample Districts - Multi-Family Student Generation Rates				
School District	K-5	6-8	9-12	Total
Sumner	0.080	0.030	0.035	0.145
Bethel	0.256	0.102	0.106	0.464
Puyallup	0.080	0.030	0.030	0.140
Average	**0.139**	**0.054**	**0.057**	**0.250**

Note: no multi-family building permits for the White River School District boundary area were provided by jurisdictons. Therefore, the average of the above three neighboring school districts were utilized in calculating multi-family student generation rates and the resultant impact fees.

APPENDIX "B"
SCHOOL CAPACITY CALCULATIONS

Elk Ridge Elementary - Capacity of New Building			
Room Name	No. of Rooms	Target Class Size	Capacity
Early K and Kindergarten	6	19	114
Grades 1-3	13	19	247
Grades 4-5	6	27	162
Self Contained Special Education	4	8	32
Subtotal Capacity	29		555
Total Capacity @ 95%			**527**

Foothills Elementary			
Room Name	No. of Rooms	Target Class Size	Capacity
Early K and Kindergarten	5.5	19	104.5
Grades 1-3	10.5	19	199.5
Grades 4-5	6	27	162
Self Contained Special Education	1	8	8
Subtotal Capacity	23		474
Total Capacity @ 95%			**450**

Mountain Meadows Elementary			
Room Name	No. of Rooms	Target Class Size	Capacity
Early K and Kindergarten	6.5	19	123.5
Grades 1-3	7.5	19	142.5
Grades 4-5	4	27	108
Self Contained Special Education	0	8	0
Subtotal Capacity	18		374
Total Capacity @ 95%			**355**

Wilkeson Elementary - Capacity of New Building			
Room Name	No. of Rooms	Target Class Size	Capacity
Early K and Kindergarten	3	19	57
Grades 1-3	6	19	114
Grades 4-5	4	27	108
Self Contained Special Education	1	8	8
Subtotal Capacity	14		287
Total Capacity @ 95%			**273**

Early Learning Center			
Room Name	No. of Rooms	Target Class Size	Capacity
Early K and Kindergarten	5	19	95
Grades 1-3	0	19	0
Grades 4-5	0	27	0
Self Contained Special Education	0	8	0
Subtotal Capacity	5		**95**

Glacier Middle School			
Room Name	No. of Rooms	Target Class Size	Capacity
General Classrooms 6-8	26	25	650
Art	2	25	50
Music	2	25	50
Physical Education	4	25	100
Science	6	25	150
Special Services	6	12	72
STEM	2	25	50
Subtotal Capacity	48		1,122
Capacity @ 83% Efficiency (1 of 6 for teacher prep)			931
Total Capacity @ 95%			**885**

White River High School			
Room Name	No. of Rooms	Traget Class Size	Capacity
General Classrooms 9-12	31	25	775
Art	2	25	50
Businesds Labs	0	30	0
Computer Labs	0	15	0
Library	1	0	0
Music	2	30	60
Physical Education	5	30	150
Science	8	30	240
CTE	10	30	300
Self Cont. Special Ed	1	8	8
RR/T-1 Pull Out	5	15	75
Other	1	30	30
Subtotal Capacity	66		1,688
Capacity @ 83% Efficiency (1 of 6 for teacher prep)			1,401
Capacity @ 95%			**1,331**

APPENDIX "C"
CONSTRUCTION COST ESTIMATES

New Elementary School Cost Estimate - 2018 Dollars	
Number of Students	500
School SF/Student	125
Construction Cost/SF	$350
Soft Cost %	45%
On Site Construction Cost	$21,875,000
Off Site Construction Cost	$2,000,000
Soft Cost	$9,843,750
Subtotal	$33,718,750
Cost for Added Capacity to Serve Growth	$23,191,756

Middle School Addition Cost Estimate-2018 Dollars	
Number of Students	300
School SF/Student	150
Construction Cost/SF	$375
Soft Cost %	45%
On Site Construction Cost	$16,875,000
Off Site Construction Cost	$1,000,000
Soft Cost	$7,593,750
Subtotal	$25,468,750
Cost for Added Capacity to Serve Growth	$17,514,265

High School Addition Cost Estimate-2018 Dollars	
Number of Students	100
School SF/Student	175
Construction Cost/SF	$425
Soft Cost %	45%
On Site Construction Cost	$7,437,500
Off Site Construction Cost	$1,000,000
Soft Cost	$3,346,875
Subtotal	$11,784,375
Cost for Added Capacity to Serve Growth	$5,775,758

APPENDIX "D"
STUDENT ENROLLMENT PROJECTIONS

White River School District Demographic Trends, Enrollment Trends, and Projections

Prepared by

William L. ("Les") Kendrick, Ph.D.

Educational Data Solutions, LLC

January 2018

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Introduction

The White River School District saw a sharp increase in it's enrollment from the late 1990's through 2006. These gains were driven by new housing development and general growth in the County. The District experienced a sharp decline in its enrollment between 2006 and 2012. Much of this is attributable to declines in homes sales and prices which hit the region and Pierce County between 2007 and 2012. The District is currently experiencing an upturn in its enrollment with large gains in the past two years, consistent with the trends that are happening throughout the County and the Puget Sound. The K-12 enrollment in Pierce County has increased by over 5,600 students over the past four years, primarily due to larger birth cohorts entering the schools and the strong Puget Sound economy that continues to bring new residents into the region. Pierce County generally, is seen as a more affordable County in comparison to its northern neighbor, King County. As a result many families look to Pierce County as an option, especially with improving economic conditions in the County and the continued availability of public transit options that allow people to live in one part of the Puget Sound region while commuting to another part. The attractions of Pierce County are reflected in the current pipeline of new housing development. There are over 10,000 units planned for development in the Bethel, Puyallup, and Sumner school districts, and even in the smaller district of White River there are approximately 1,600 units that are planned for construction over the next decade. The recent enrollment trends reflect the current demographic environment. But what does the future hold?

The purpose of the present analysis and report is to provide long term enrollment forecast for the White River School District. The first part of this report provides a narrative describing the historical enrollment and demographic trends along with a discussion of what is likely to happen in the future. The next part of the report is divided into sections that highlight specific enrollment and demographic trends in the form of various charts and tables. Each section in this part of the report is preceded with a set of bullet points that highlight the significant information to keep in mind when viewing the various charts and tables. The final section of the report describes the methodology used to conduct the forecasts along with detailed forecasts by grade level.

Introduction

Enrollment and Demographic Trends
Past, Present, and Future

As noted in the introduction, enrollment in the White River School District has generally been trending up over the past two decades. There was a recent period, between 2006 and 2012 when enrollment declined. This was primarily due to the completion of various housing projects that began in the late 1990's and the decline in homes sales and prices that hit the Puget Sound and Pierce County specifically between 2007 and 2012. Since 2012 enrollment growth in the Puget Sound and Pierce County has improved, primarily due to the larger birth cohorts that have been eligible for school in recent years, and improvements in the local economy and housing market. White River is a beneficiary of these trends along with the other districts in Pierce County. Enrollment in the County has increased by over 5,600 students in the past four years. We expect enrollment to continue to trend up in the County over the next decade as increasingly larger birth cohorts enter the schools and the large pipeline of new construction homes reaches fruition. White River, like many other Districts, is likely to see substantial growth from these trends. It is helpful to look at these trends in detail to see their potential effect on enrollment.

The birth cohorts that have become eligible for school in recent years have been much larger than the cohorts from previous years. In Pierce County there were approximately 1,300 more births per year on average between 2006 and 2015, than we saw between 1996 and 2005. These larger than average birth cohorts began entering the schools in 2011 producing a marked increase in the kindergarten enrollment in Pierce County school districts. This trend has continued into 2016 with 11,757 births. Our forecast of births based on recent fertility rates and the number of women in their child-bearing years suggests that the number will stay well above 11,000 for the foreseeable future. The number of children born to women in their child-bearing years has not changed substantially, but the growth of women in certain age groups (Ages 20-35) has exceeded expectations. This is why we continue to see larger birth cohorts throughout the Puget Sound over the past five years.

Introduction

Enrollment and Demographic Trends

Past, Present, and Future

Another factor that is driving enrollment is increased population growth within Pierce County. The County is generally seen as providing a lower cost of living than King County leading many new residents to look at Pierce County as a viable option for their families. The latest forecasts from the State predict that the County will grow by 1.6% annually between now and 2020 and by 1.2% annually between 2020 and 2025. These figures are slightly higher than the predictions that were made in 2012, and they reflect recent improvements in the Pierce County and Puget Sound economy.

When we look at population forecast for the Cities that impact White River as well as the forecasts for surrounding areas in the County from the Puget Sound Regional Council, they show growth rates that are higher than the overall County projection. Taken together these estimates suggest that the White River School District could grow by almost 2% annually over the next decade, higher than the overall County rate of growth. This suggests that the District will see an increase in its share of the overall County population which will likely lead to an increase in its share of the County K-12 population. This is not certain, of course, since it is possible that the District could see more growth in older and childless populations, and less growth of families with children. But even if White River grew at the same rate as the rest of the County we would still expect some of this growth to be families with children, since this is the part of the population that is expected to grow rapidly over the next decade.

The County K-12 public school population was estimated at 133,031 as October 2017. Our latest forecast indicates that this population will grow to over 138,00 students by 2020 and almost 146,000 students by 2025. If White River maintained their current share of this population (about 3%) this would put the enrollment at 4,100 by 2020 and 4,300 by 2025. It is likely, however, that the District will grow at a faster rate than the overall County and that this will lead to a slight increase in market share over time.

Introduction

Enrollment and Demographic Trends
Past, Present, and Future

The final factor to look at when considering future enrollment is housing. There are three districts in Pierce County, Bethel, Puyallup, and Sumner, that combined show over 10,000 new units in their housing pipeline. This suggests that the demand for new housing in the County is high. In White River specifically there are approximately 1,600 units in the housing pipeline slated for future construction and sale. Some of these projects are already underway, while others will likely be started in the near future. We expect the majority of these units to be completed over the next six to eight years.

It is always difficult to predict the timing of new housing developments. Projects may speed up or slow down based on market conditions. If we look at the sales history from 2005 to 2017 we find some information about the pace of development. In 2005 and 2006 which was roughly the peak of the housing boom in the Puget Sound, the number of new homes sold in the District was 140 in 2005 and 123 in 2006. It is possible that more homes were sold in years prior to this. We do not have data back beyond 2005. From the Census data, however, we know that about 1,500 units were added to the District's housing stock between 1990 and 2000 and about 1,200 units were added between 2000 and 2010. If these figures were to repeat themselves over the next decade it would take about ten years for the current pipeline to finish (assuming about 160 units per year). Given the current favorable environment for housing we are predicting that this pipeline will take about eight years for completion and that there will be additional development beyond that point. The latter assumption is supported by population forecasts and average household size estimates, which indicate how much housing would be needed to accommodate future population growth.

Introduction

Enrollment and Demographic Trends
Past, Present, and Future

Given the uncertainty of development timelines, and the fact that we can predict, but not be certain, about the size of future birth cohorts, we have employed multiple methods to estimate future enrollment. Some of these methods use population forecasts and their relationship to enrollment to predict the future. Others are simple cohort models that project current trends into the future. And others look at future housing development and the number of students per house that we might expect as a means for estimating enrollment over the decade. Each of these methods have strengths and weaknesses, but taken together they point to a general trend (enrollment is going up) and the average of all the estimates can be a good guide for the future. The latter point is supported by the research literature.*

Uncertainty is an inherent part of any forecast. Demographic conditions can change and the assumptions that guided the forecast can turn out to be wrong. We believe the forecasts in this report are based on reasonable assumptions about births, population, housing, and the general County enrollment trends. But in recognition of the uncertainty inherent in any forecast we have developed low and high alternatives to our main forecast that show what might happen if population and housing growth were to proceed at a slower or faster pace than we have assumed in our main model. It is recommended that the District consider these forecasts in planning and ask what contingency plans would be appropriate if enrollment were to trend closer to the low or high forecasts. And it is highly recommended that these forecasts be updated periodically to consider new information.

**John Armstrong (2001) Combining forecasts: A review and annotated bibliography. International Journal of Forecasting, (5), 559-583.*

Introduction

Enrollment and Demographic Trends
Past, Present, and Future

The next sections of this report provide charts and tables with information about enrollment trends, births, population, and housing. Each section is preceded by a set of bullet points which highlight the important information to consider when looking at the charts and tables. The final section presents our forecasts along with a general discussion of the methodology used to generate the numbers.

Enrollment Trends

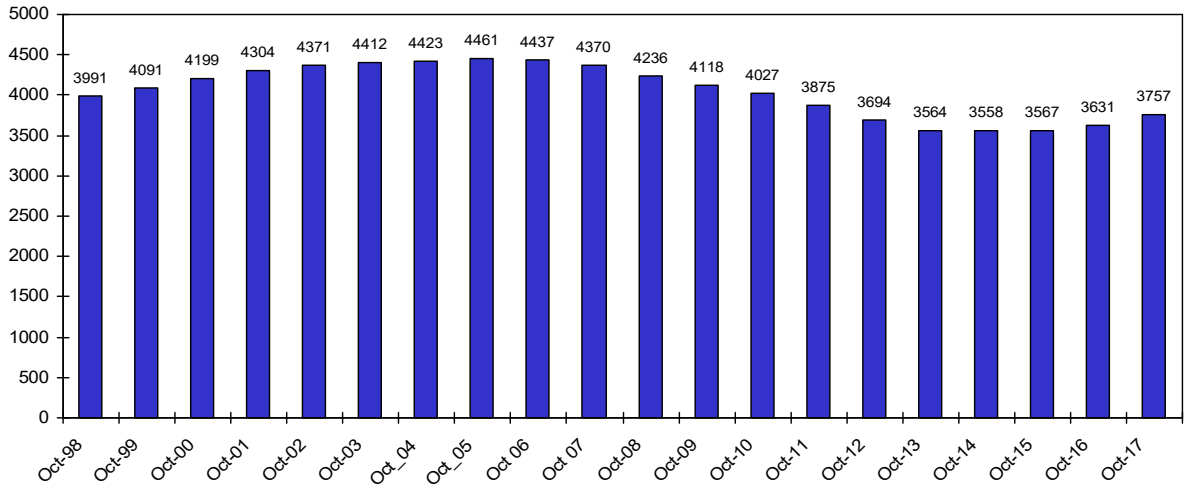
Enrollment Trends

Key Points and Highlights

- After several years of declining enrollment the White River school district has been trending up in the last few years as the economy and housing market in Pierce County has recovered.
- After declining over a long period of time, the District's share of the County K-12 population has been increasing in the past two years as well, indicating that the District is starting to grow at a slightly faster pace than other parts of the County.
- K-12 enrollment in Pierce County has grown by over 5,600 students in the past four years.
- K-12 enrollment is also growing in King County and other parts of the Puget Sound. This growth is being driven by larger birth cohorts that started entering the schools in 2011 and the robust Puget Sound economy that is continuing to bring new residents into the region.
- Private school enrollment in the County continues to show a flat or declining pattern, indicating that many families are opting to enroll their children in the public schools over the private schools.

White River Enrollment Trend

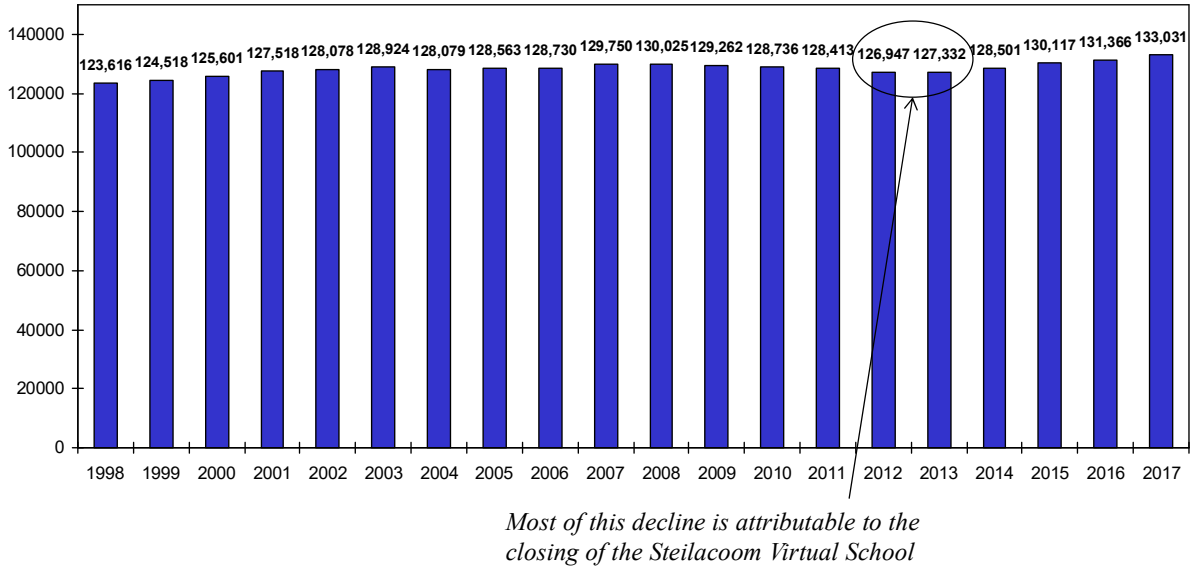
October P223 Headcount Enrollment



Pierce County Public Schools Enrollment Trend

October OSPI P223 Numbers

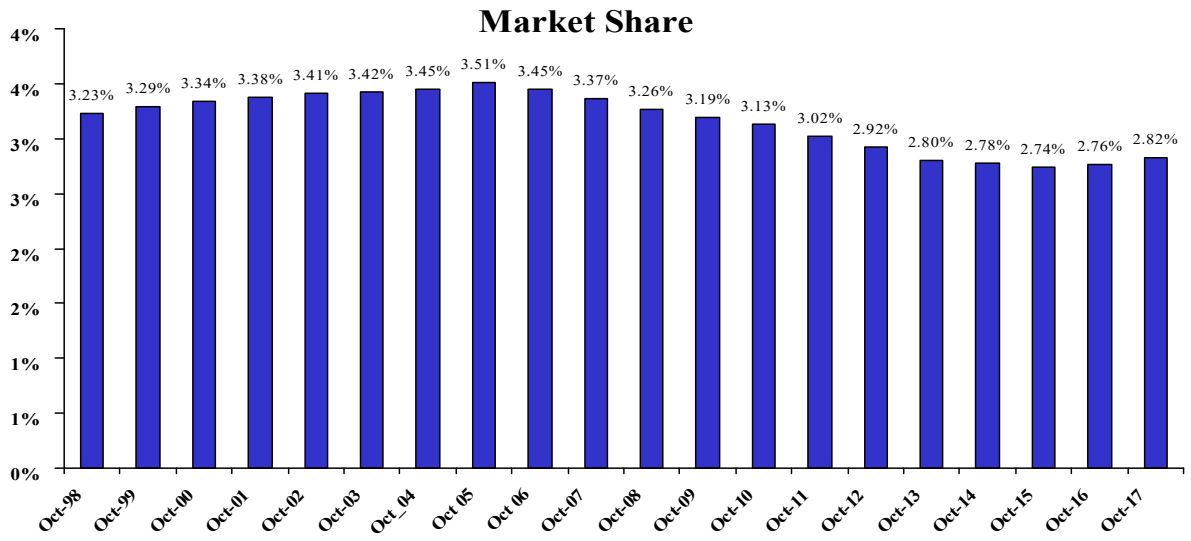
Numbers May Have Changed Since the Original Reporting of the Data



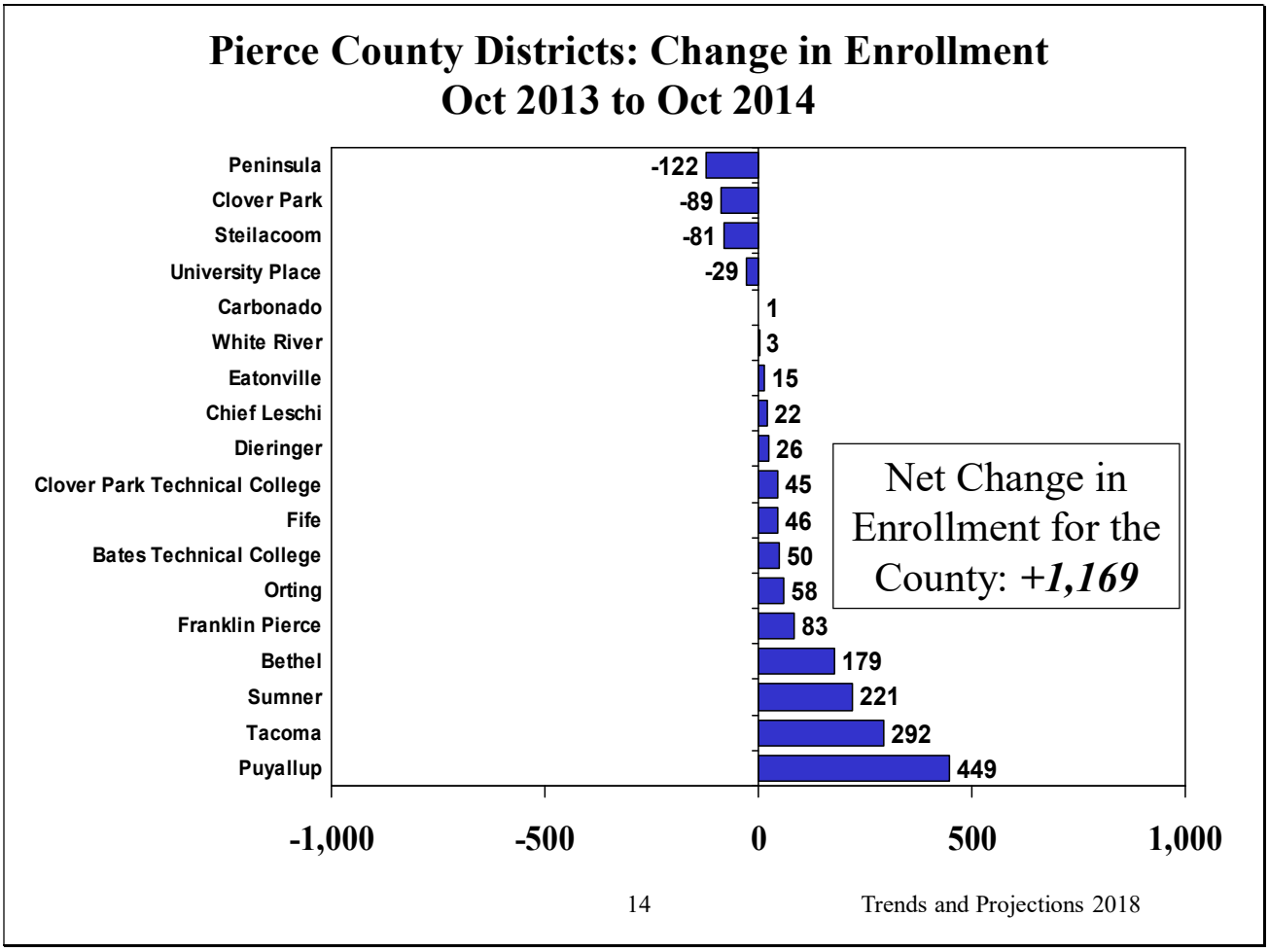
Most of this decline is attributable to the closing of the Steilacoom Virtual School

White River's Share of County K-12 Public School Enrollment

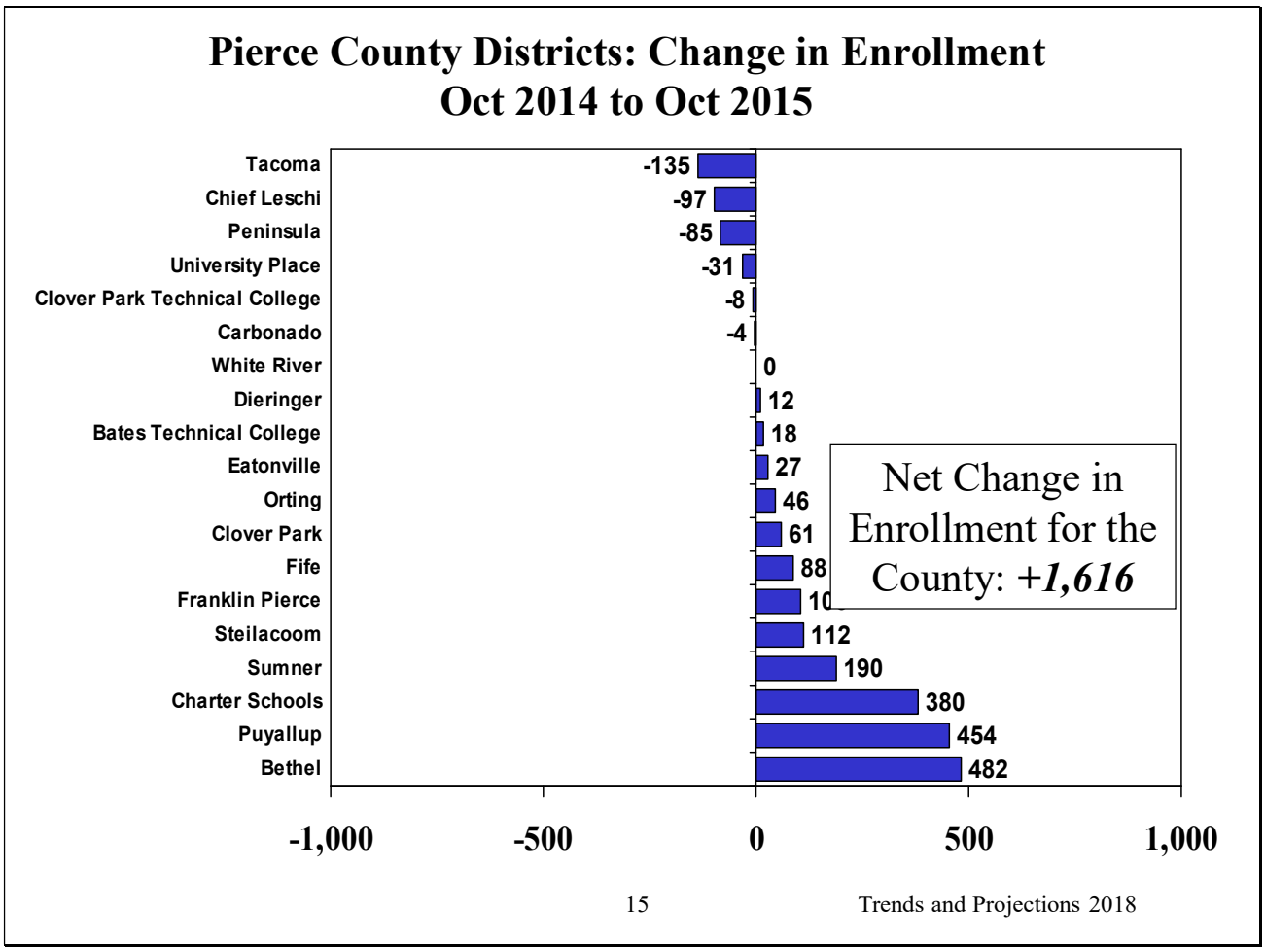
P223 October Enrollment from OSPI



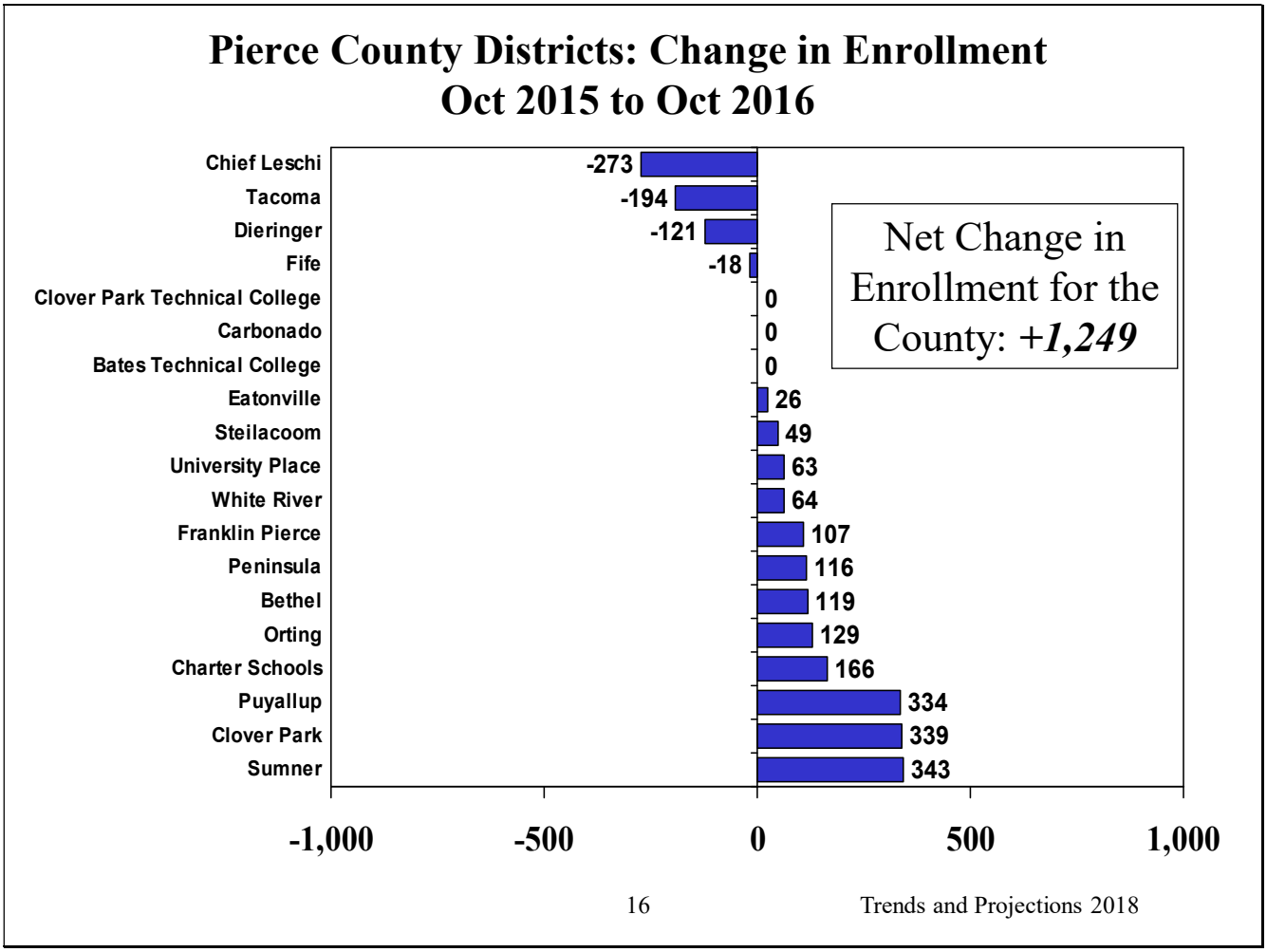
Slide 14

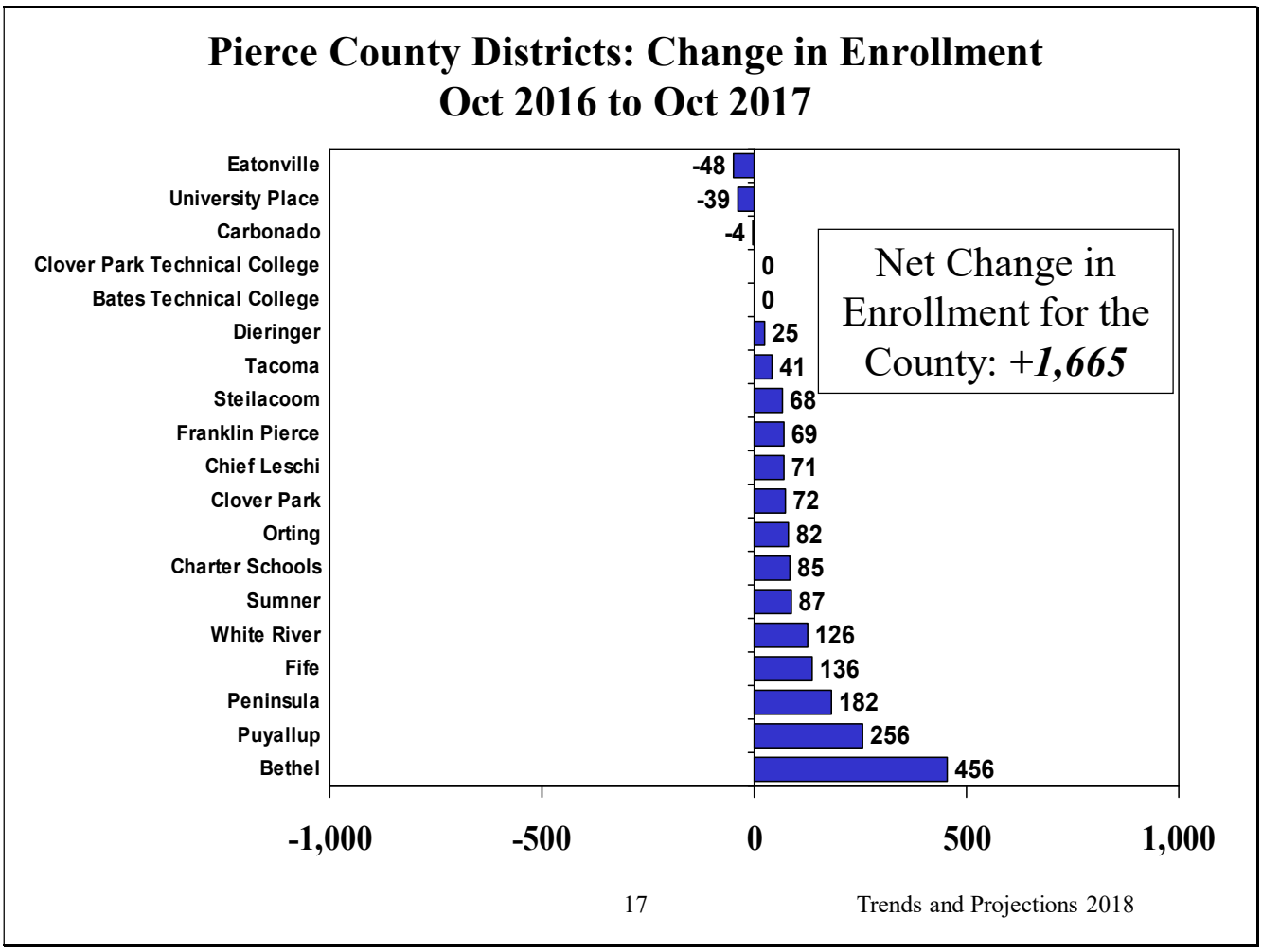

Pierce County Districts: Change in Enrollment
Oct 2013 to Oct 2014
Peninsula -122
Clover Park -89
Steilacoom -81
University Place -29
Carbonado 1
White River 3
Eatonville 15
Chief Leschi 22
Dieringer 26
Clover Park Technical College 45
Fife 46
Bates Technical College 50
Orting 58
Franklin Pierce 83
Bethel 179
Sumner 221
Tacoma 292
Puyallup 449
-1,000
-500
0
500
1,000
Net Change in Enrollment for the County: +1,169
14
Trends and Projections 2018

Slide 15


Pierce County Districts: Change in Enrollment
Oct 2014 to Oct 2015
Tacoma -135
Chief Leschi -97
Peninsula -85
University Place -31
Clover Park Technical College -8
Carbonado -4
White River 0
Dieringer 12
Bates Technical College 18
Eatonville 27
Orting 46
Clover Park 61
Fife 88
Franklin Pierce 10
Steilacoom 112
Sumner 190
Charter Schools 380
Puyallup 454
Bethel 482
-1,000
-500
0
500
1,000
Net Change in Enrollment for the County: +1,616
15
Trends and Projections 2018

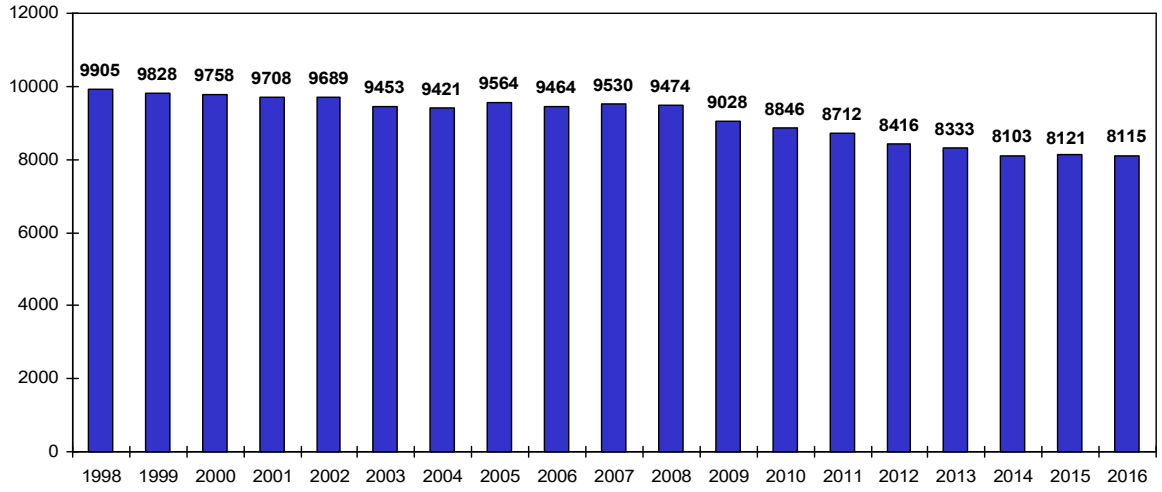
Slide 16


Pierce County Districts: Change in Enrollment
Oct 2015 to Oct 2016
Chief Leschi -273
Tacoma -194
Dieringer -121
Fife -18
Clover Park Technical College 0
Carbonado 0
Bates Technical College 0
Eatonville 26
Steilacoom 49
University Place 63
White River 64
Franklin Pierce 107
Peninsula 116
Bethel 119
Orting 129
Charter Schools 166
Puyallup 334
Clover Park 339
Sumner 343
-1,000
-500
0
500
1,000
Net Change in Enrollment for the County: +1,249
16
Trends and Projections 2018


Pierce County Districts: Change in Enrollment
Oct 2016 to Oct 2017
Eatonville -48
University Place -39
Carbonado -4
Clover Park Technical College 0
Bates Technical College 0
Dieringer 25
Tacoma 41
Steilacoom 68
Franklin Pierce 69
Chief Leschi 71
Clover Park 72
Orting 82
Charter Schools 85
Sumner 87
White River 126
Fife 136
Peninsula 182
Puyallup 256
Bethel 456
Net Change in Enrollment for the County: +1,665
-1,000
-500
0
500
1,000
17
Trends and Projections 2018

Private School Enrollment
Pierce County
Pre-K to 12

Source: OSPI



Birth Trends

Birth Trends and Enrollment

Key Points and Highlights

- There were approximately 1,300 more births annually between 2006 and 2015 than we saw in the previous decade (1996-2005). This trend has continued into 2016. There were 11,757 births in the County in 2016, the highest number in the past six years.

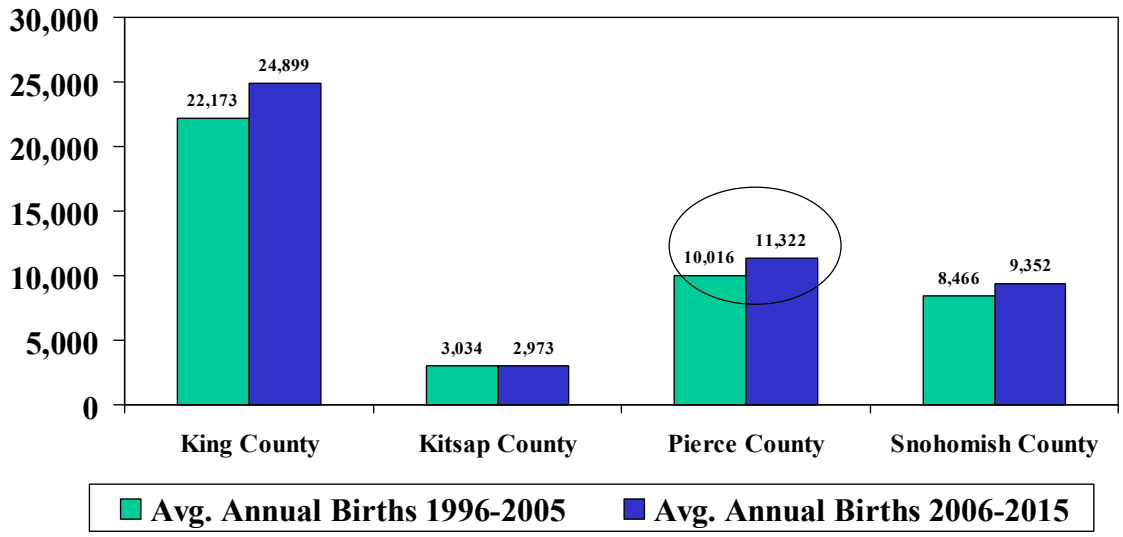
- Births are projected to remain above 11,000 a year for the foreseeable future resulting in a large net gain in the K-12 enrollment in Pierce County between 2018 and 2027. This trend is the result of growth in the population of women reaching their child-bearing years over the next decade.

- Because of the larger birth cohorts entering the schools, the K-12 enrollment in Pierce County is projected to increase from 133,031 students in October 2017 to 138,295 students by 2020, and just under 146,000 students by 2025.

- After that point there will likely be some moderation of the overall growth trend as larger graduating classes in the latter part of the decade start to offset the effect of the larger kindergarten classes.

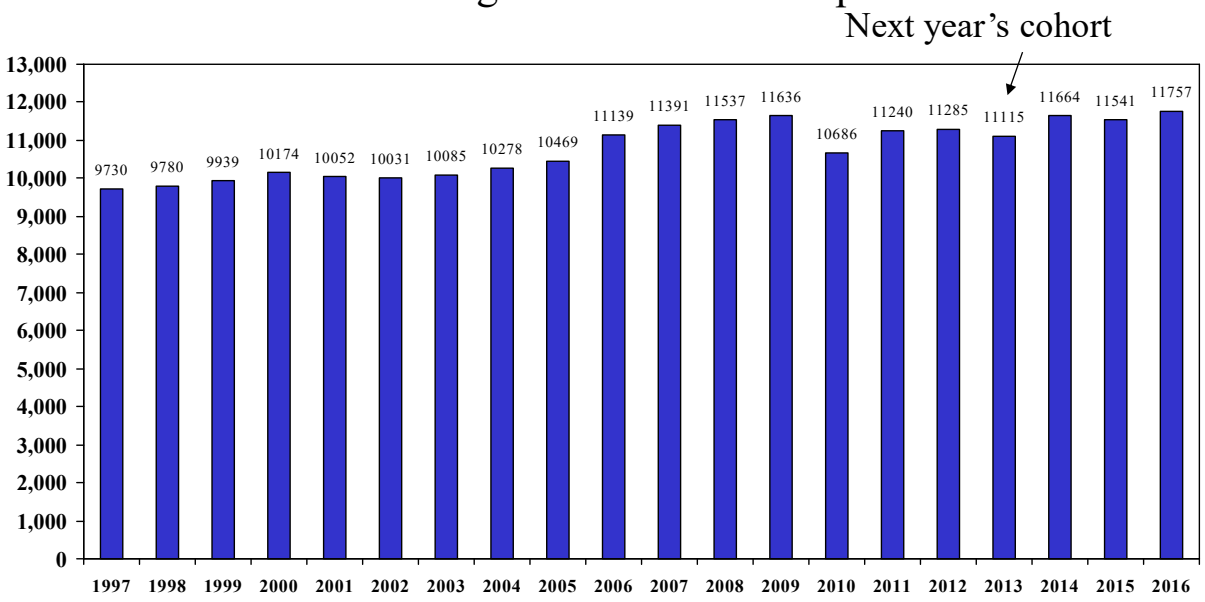
Average Annual Births by County

Source: State of Washington Department of Health Birth Files



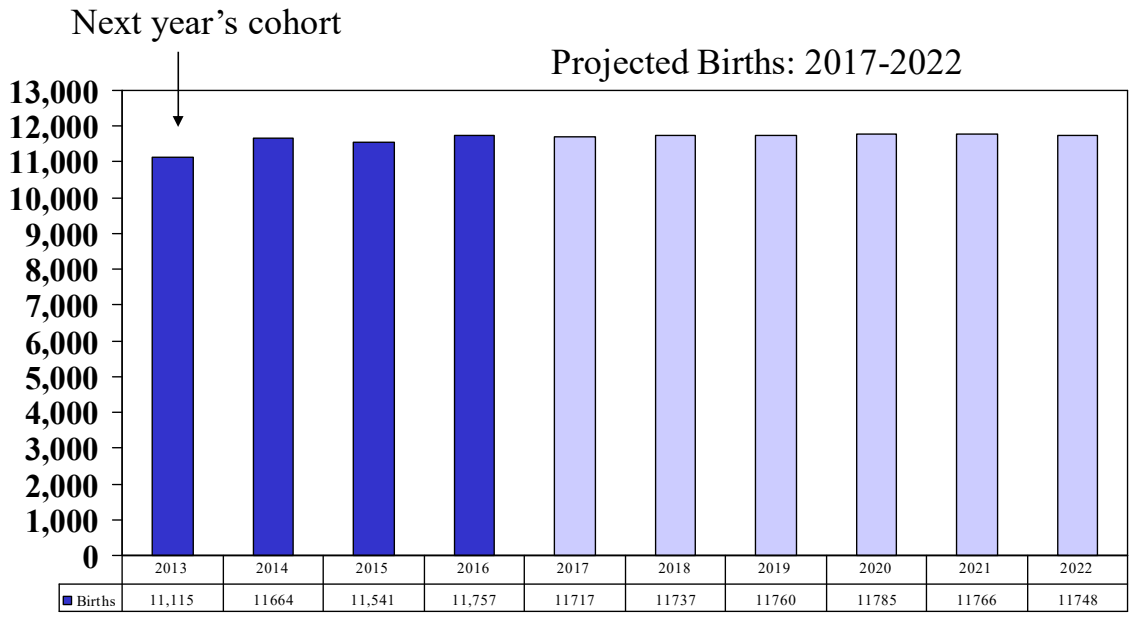
Pierce County Births

Source: Washington State Health Department



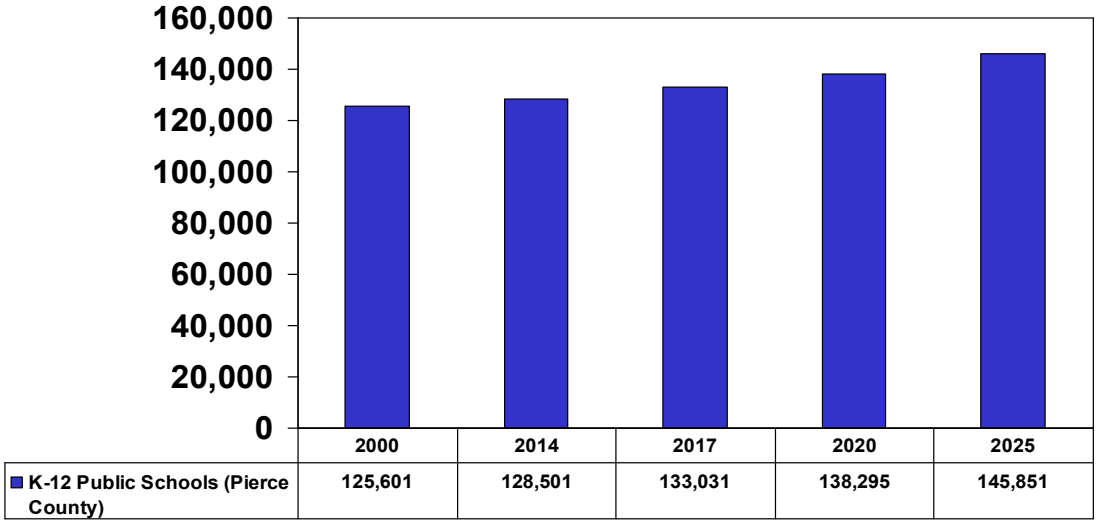
Projected Pierce County Births

Forecast Based on Projected Population Growth for Women in Their Childbearing Years (Using the Medium Range State Forecast for Pierce County) and the Average of the Fertility Rates from the Past Two Years



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Births	11,115	11664	11,541	11,757	11717	11737	11760	11785	11766	11748

County K-12 Public School Forecast
Based on Projected Births, Grade Level Enrollment Trends and Projected County Population Growth



	2000	2014	2017	2020	2025
K-12 Public Schools (Pierce County)	125,601	128,501	133,031	138,295	145,851

Population Trends

Population Trends

Key Points and Highlights

- The population of Pierce County grew at a rate of 1.8% over the past year. This is the second straight year that growth has outpaced the projected rates that were predicted in the 2012 forecast from the State.

- Historical data shows that there is a relatively strong correlation between the District's share of the general County population and the County K-12 population. As one goes up or down, so too, does the other.

- Forecasts for the cities that make up part of White River's population as well as forecasts for surrounding areas from the Puget Sound Regional Council suggest that the District's share of the general County population will increase over time. In other words, these forecasts show that the District is likely to see population growth rates that exceed the rate predicted for the County as a whole.

- As the District's share of the overall County population increases, we expect a corresponding increase in the District's share of the K-12 population.

Population Trends

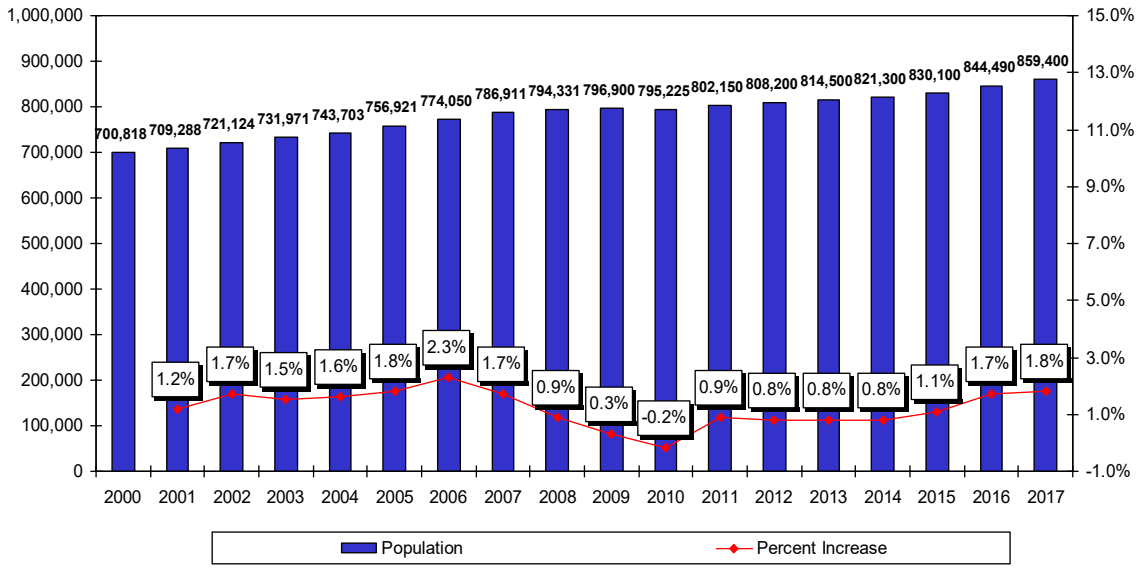
Key Points and Highlights

- A population based forecast that uses the correlation between the District's share of the general population, and its share of the County K-12 population predicts that enrollment will exceed 5,000 students by 2027.

- This is only one forecast, of course, and we will be considering others in the following sections. But it does suggest that if the District's population forecast is correct the District will see some increase in it's share of the County K-12 population over time.

Pierce County Population Estimates

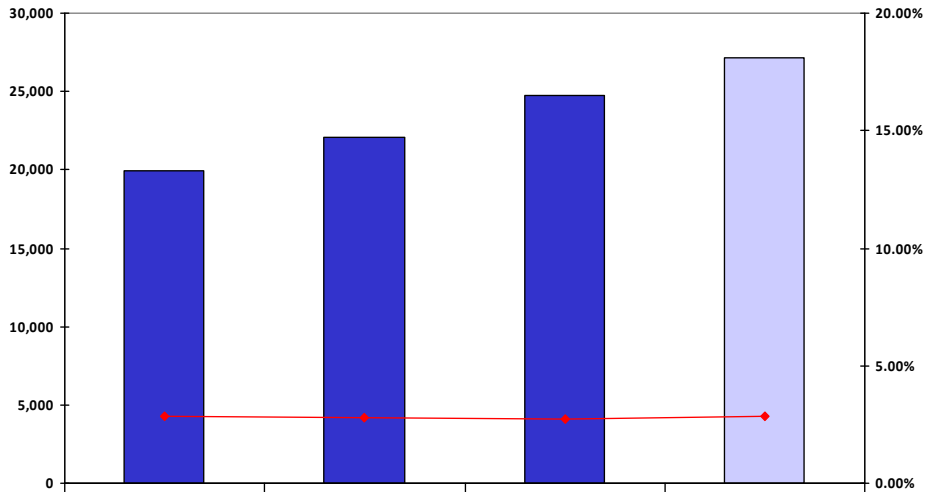
Source: OFM State of Washington



White River School District Population and Forecast

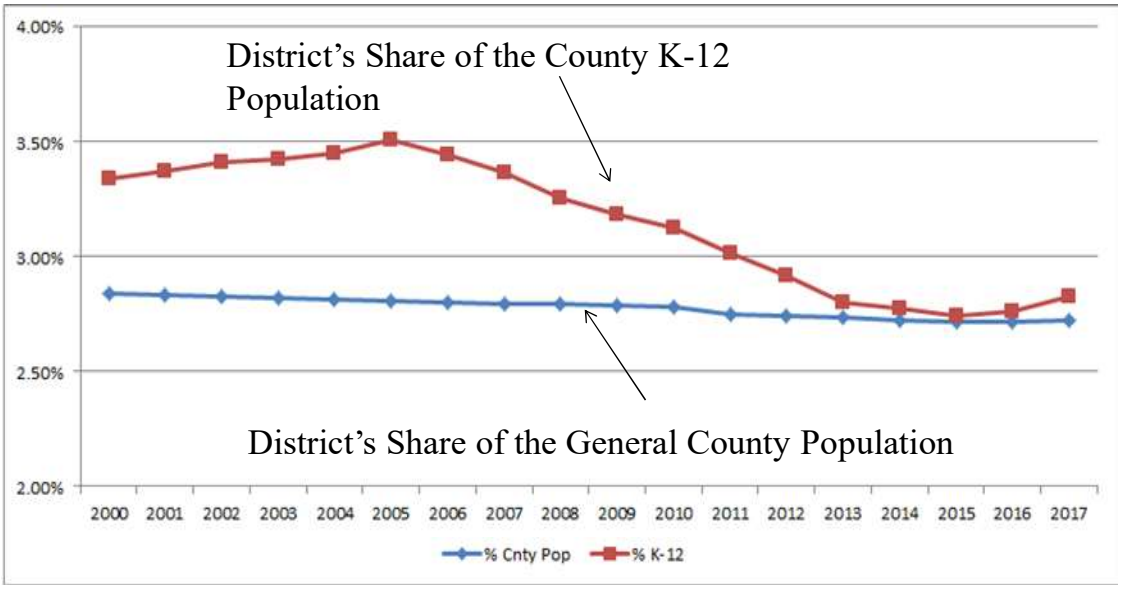
Based on the Puget Sound Regional Council's
Neighborhood Forecasts for Cities and Surrounding Areas

Note: Neighborhoods for the District Include Census Tracts Most Closely Aligned with the White River School District Boundary Area



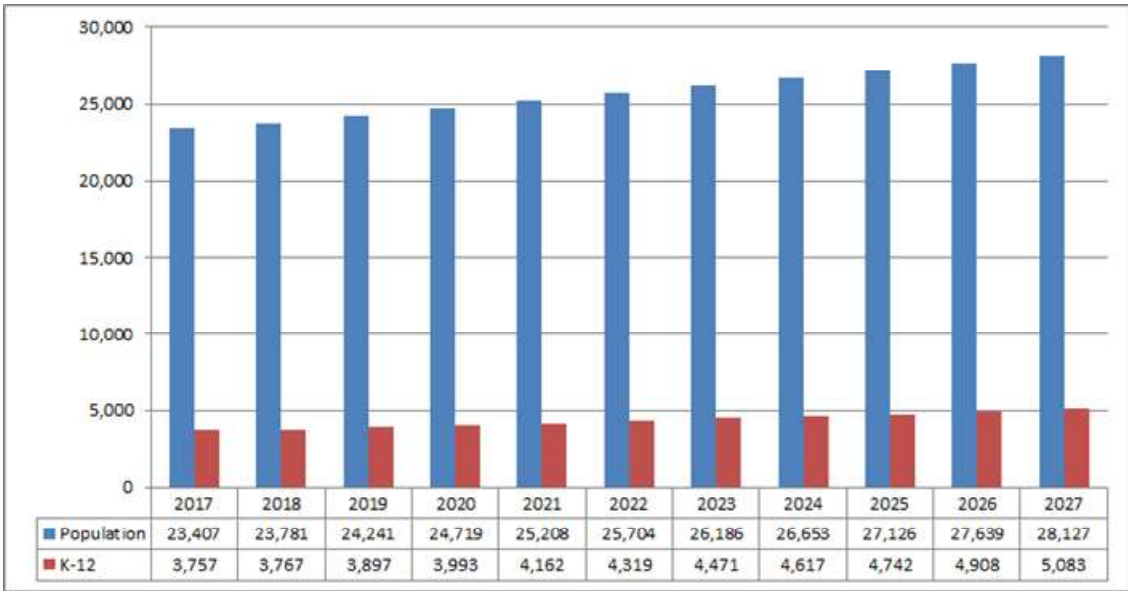
	Census 2000	Census 2010	2020	2025
Population	19,906	22,116	24,719	27,126
% of County Pop. (Forecast)	2.84%	2.78%	2.74%	2.84%

White River's Share of the General Population and the K-12 County Population: Historical Data



The correlation between these two percentages is .94 meaning that about 90% of the variation in White River's share of the County K-12 population can be predicted based on knowing the District's share of the general population. Notice, however, that the relationship isn't clear cut since there were years where the K-12 population percentage was rising even though the percentage of the general population was declining. This suggests some caution when using this model to predict future enrollment. Other factors like the type of housing might be influencing the relationship.

Projected Enrollment Based on the District's Share of the County Population and its Share of the County K-12 Population



	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Population	23,407	23,781	24,241	24,719	25,208	25,704	26,186	26,653	27,126	27,639	28,127
K-12	3,757	3,767	3,897	3,993	4,162	4,319	4,471	4,617	4,742	4,908	5,083

Housing Trends

Housing Trends

Key Points and Highlights

- Data from the Census shows the District added just over 1,500 units to its housing stock between the 1990 and 2000 Census and approximately 1,200 more between the 2000 and 2010 Census.

- Housing development since the 2010 Census has moved at a much slower rate, most likely due to the economic and housing slump that affected growth in Pierce County between 2007 and 2012. The best estimates from the State and New Home Trends suggest that about 400 units have been added to the District's housing stock between 2010 and 2017.

- Using the population forecast in the previous section and the latest estimate of average household size (using 2017 estimate of population and housing in the District) we would predict that an additional 1,800 units would be needed over the next decade to support the expected population growth.

- Current data from the District and New Home Trends tracking City and County development shows similar figures. There are approximately 1,600 single family and mixed use units scheduled for development sometime in the future. There are also another 766 units in expired, "stalled" or withdrawn projects (New Home Trends). Some of these projects could be resurrected in the future assuming that the land is still zoned for residential development.

Housing Trends

Key Points and Highlights

- Home sales in the District have improved over the past few years compared to the period between 2008 and 2012. This is consistent with the trends we are seeing in other Districts throughout Pierce County.
- The number of new homes being developed and sold in a given year has generally been close to 200 or fewer. This is true even in the past few years as enrollment growth has accelerated.
- Given these figures we might expect that the current developments in the pipeline could take between six to eight years before they are fully developed.
- We should also note that the sale of existing homes has improved in the past few years, suggesting that recent growth in enrollment may be attributable to the sale of both new and existing homes.

Housing Trends

Key Points and Highlights

- Our best estimates, using historical data and information about various projects suggests that the District will see between 150-200 new homes added in each year of the forecast (some years will be at the low end of that range and others at the high end).

- This means that the current pipeline will likely be finished somewhere around 2025, but we expect continuing development at a similar pace beyond that time to accommodate continued growth in the population of the County.

- The chart on page 41 shows an enrollment forecast based on our housing forecast and the number of students per house that we expect given the 2010 Census figure and recent estimates. The number of students per house has dropped from the 2010 Census estimate from 47 students per 100 homes to 42 students per 100 homes, but it is rising in recent years in the District and the County as the larger birth cohorts have started to enroll.

- We assumed about 44 students per 100 homes in the forecast on page 41 (using an average of the Census number and recent estimates). In a given year this number may fluctuate up or down but it should trend up some over the decade due to the larger birth cohorts that are entering schools and the comparatively small graduating classes that are currently exiting the schools.

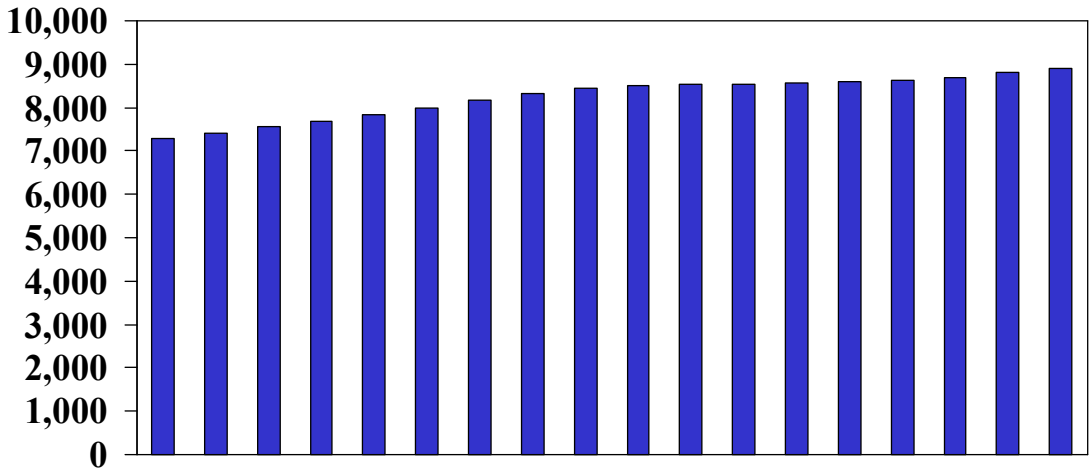
Housing Trends

Key Points and Highlights

- This is another forecast that we used to guide the development of our main forecast.
- In addition to the main forecast presented in the latter sections we also developed low and high alternatives that show what might happen if population and housing growth were to move at a slower or faster pace than we have assumed in our main forecast.

Housing Units in the White River School District

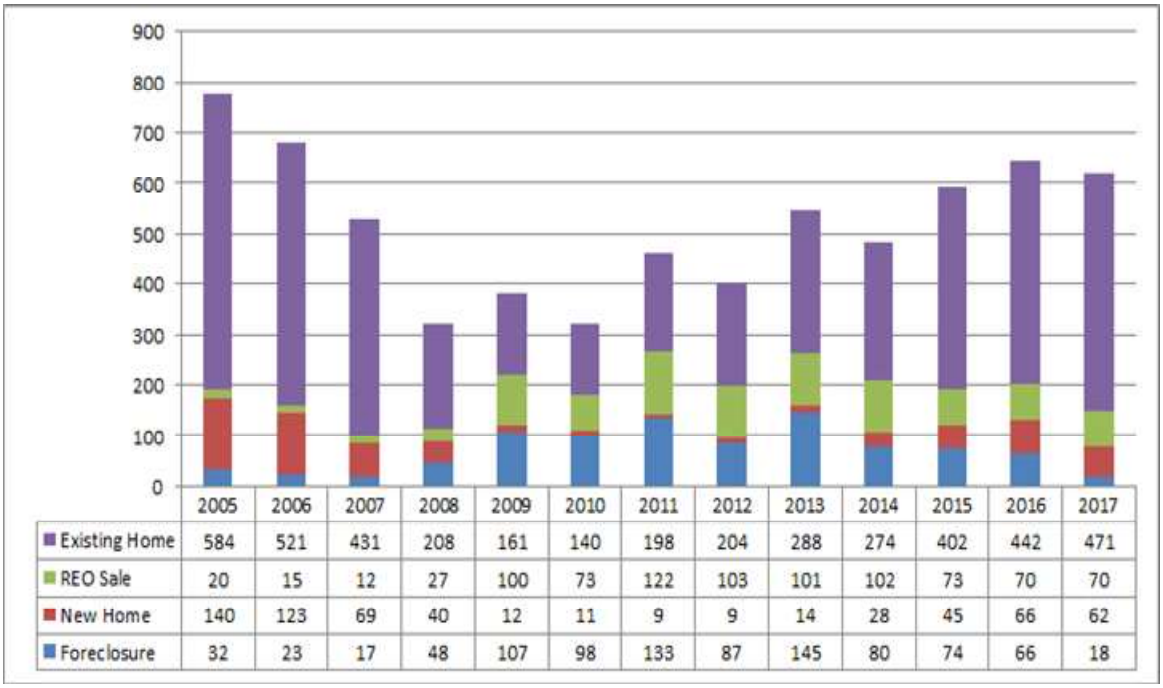
Source: The Office of Financial Management State of Washington Estimate



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total Housing Units	7,293	7,408	7,556	7,683	7,831	7,976	8,158	8,326	8,431	8,494	8,537	8,542	8,567	8,599	8,634	8,695	8,798	8,917

Home Sales in the White River School District

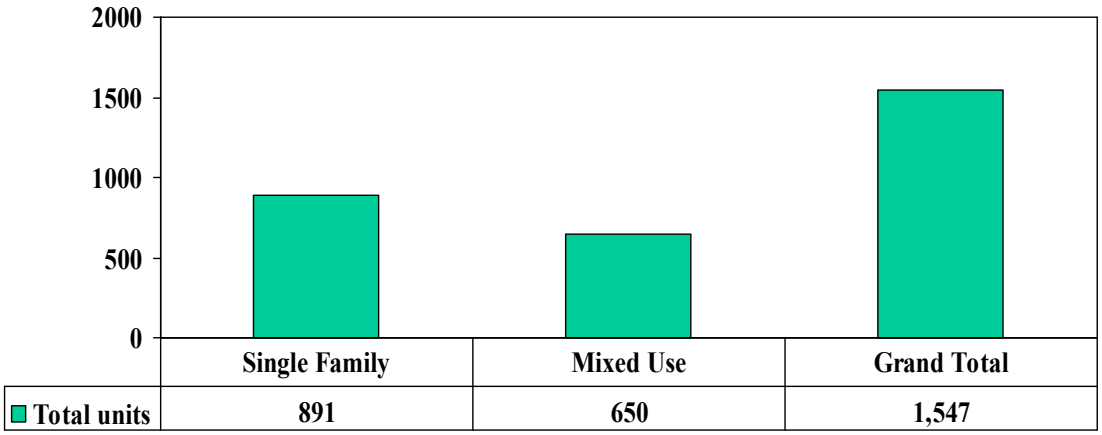
Source: Metro Study Assessor's Database



	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Existing Home	584	521	431	208	161	140	198	204	288	274	402	442	471
REO Sale	20	15	12	27	100	73	122	103	101	102	73	70	70
New Home	140	123	69	40	12	11	9	9	14	28	45	66	62
Foreclosure	32	23	17	48	107	98	133	87	145	80	74	66	18

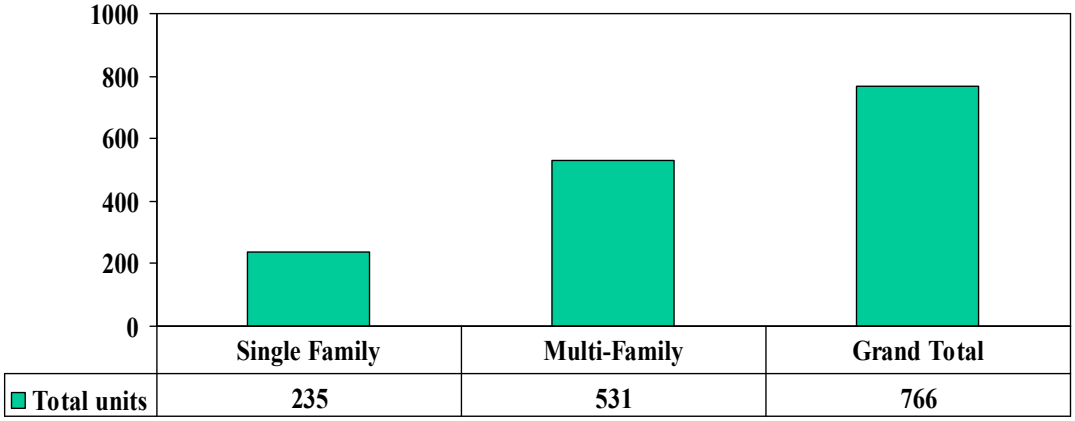
Number of **New Construction** Homes for Sale or Planned for the Future in the White River School District

Source: District Data Obtained from Cities and Counties



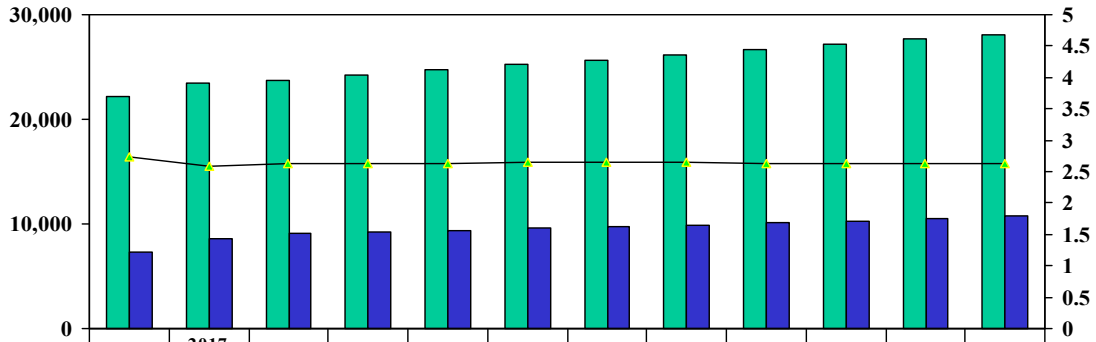
Number of Units in Expired, Withdrawn, or "Stalled" Projects White River School District

Source: New Home Trends



Housing and Population Forecasts Combined

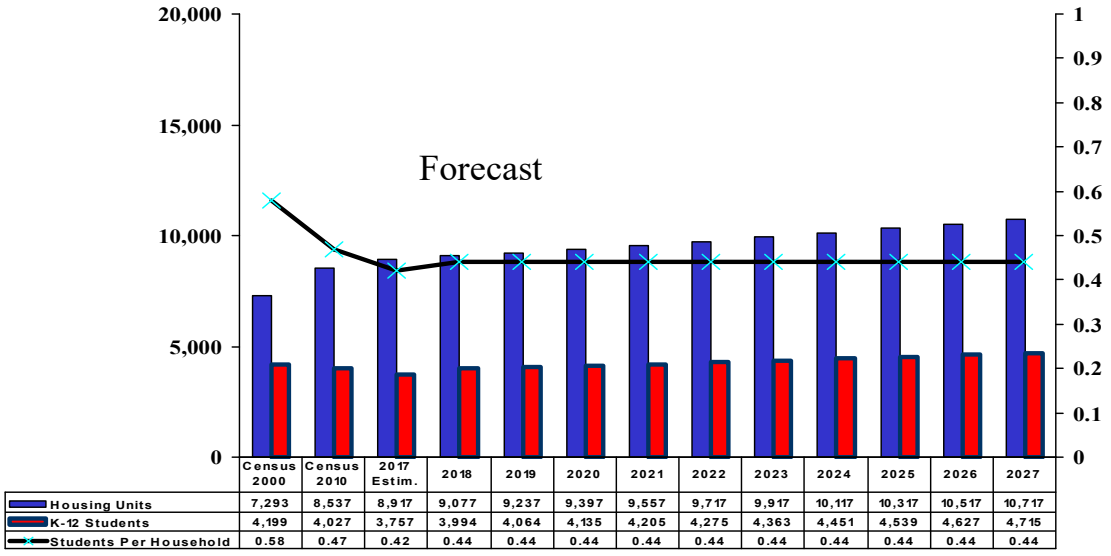
The housing and population forecasts were each done separately. When combined they provide an estimate of the average household size over time.



	2010	2017 Estim.	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Population	22,116	23,407	23,781	24,241	24,719	25,208	25,704	26,186	26,653	27,126	27,639	28,127
Housing Units	7,293	8,537	9,077	9,237	9,397	9,557	9,717	9,917	10,117	10,317	10,517	10,717
Avg HH Size	2.73	2.59	2.62	2.62	2.63	2.64	2.65	2.64	2.63	2.63	2.63	2.62

A Student Yield Forecast For White River Based on the Housing Forecast and the Projected Number of Students per House

Assumes 44 students per 100 Homes (This includes all homes both new and existing)



	Census 2000	Census 2010	2017 Estim.	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Housing Units	7,293	8,537	8,917	9,077	9,237	9,397	9,557	9,717	9,917	10,117	10,317	10,517	10,717
K-12 Students	4,199	4,027	3,757	3,994	4,064	4,135	4,205	4,275	4,363	4,451	4,539	4,627	4,715
Students Per Household	0.58	0.47	0.42	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44	0.44

District Enrollment Forecasts

Alternative Forecasts

Key Points and Highlights

- In deciding where to land our final recommended forecast we have used different models to project enrollment. Some of these models, like cohort survival, project enrollment by grade level. Others like the population and housing models presented in the previous sections look at total enrollment without breaking it out by grade level.

- The following pages show the results of different models that can be used to project enrollment. The first page provides a brief description of each model followed by a page showing the results.

- Our final forecast model is based on births, birth forecasts, information about how students roll up through the grades (cohort survival) and expected growth from new housing. We have made some adjustments to our main model so that it trends close to the average of these alternative models. This was done based on the assumption that the average of different models provides a more accurate picture of the future than any one model.

- We have also created low and high alternatives to our main model that show what might happen if population and housing growth were to move at a slower or faster pace than what we have assumed in our main model.

Alternative Projections

Based on Different Models

- **3 and 6 Year Cohort Models:** Shows what might happen if enrollment growth trended in a manner that is similar to the average growth of the past three years and the past six years.

- **Linear Model Using Population Forecasts:** This model uses the correlation between the District's share of the general County population and the County K-12 population to predict future enrollment. To do this we used the County forecast from the State, and our own forecasts of the County K-12 population and the District population. The results of this model were presented in the population section of this report.

- **Population Based Cohort Model:** This models uses the average growth trends of the past five years to project enrollment into the future. The future forecast is then adjusted for projected changes in the County Age 5-19 population using forecasts from the State.

- **Housing Based Forecast:** This model uses an estimate of the number of students per house (both new and existing) along with our housing forecast to predict the future population of the District.

- **The results of these different models are shown on the following page.**

Alternative Forecasts of the White River School District Enrollment

	Actual	Forecast									
	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
3 Year Cohort	3,757	3,854	3,993	4,112	4,255	4,390	4,541	4,655	4,781	4,873	4,897
6 Year Cohort	3,757	3,786	3,845	3,883	3,939	3,994	4,067	4,109	4,163	4,193	4,164
Linear Model Using Population Forecasts	3,757	3,767	3,897	3,993	4,162	4,319	4,471	4,617	4,742	4,908	5,083
Population Based Cohort Model*	3,757	3,879	3,971	4,036	4,119	4,190	4,283	4,343	4,417	4,449	4,421
Housing Forecast Based on K-12 Per House	3,757	3,994	4,064	4,135	4,205	4,275	4,363	4,451	4,539	4,627	4,715
Average		**3,856**	**3,954**	**4,032**	**4,136**	**4,234**	**4,345**	**4,435**	**4,528**	**4,610**	**4,656**

**This model uses a six year cohort average to roll the numbers foreward and then adjusts the forecast for projected growth in the Age 5-19 population (a proxy for K-12) using State forecasts for the County.

Methodology for the Forecast

The forecasts at the end of this report are based primarily on birth counts, birth forecasts, grade level enrollment trends, and projected changes in the K-12 population over time due to population growth and new home construction and sales. The following provides a brief description of the methodology used to create the forecast.

Births and Birth Forecasts

The number of county births is known through 2016 which means that we can predict kindergarten enrollment based on actual births out to 2021. Beyond that point, births were projected based on the most recent fertility rates for the County and a forecast of the number of women likely to reach their childbearing years over time using the medium range county forecast from the State of Washington.

Projecting Kindergarten Enrollment

Kindergarten enrollment was projected using an average birth-to-k ratio and a trend of these ratios over the past few years. The birth-to-k ratio compares the kindergarten enrollment in a given year to births five years prior to that year. The trend anticipates how the ratios might fluctuate from year to year. The combination of an average and a trend line produces results that can vary from year to year. But in general we expect an upward trend in the kindergarten enrollment due to the larger birth cohorts that are scheduled to enter the schools in the coming years.

Methodology for the Forecast

Projecting Grades 1-12

The forecast at grades 1-12 was based on grade level cohort rates which predict the net gain and/or loss in enrollment as students progress from one grade to the next. A three year weighted average was used to predict next year's enrollment. The three year average reflects the most recent demographic trends. The forecasts for subsequent years were based on an average of the past five years which more adequately reflects both low and high forecast years. We assume there will be some variation in growth over the course of the forecast (both higher and lower years) and the five year average more adequately reflects the average of these variations.

Adjustments for Housing and Population Growth

The forecasts for each year and grade were then adjusted to reflect projected growth in new housing development over time. This amounted to adding students to the projected forecast based on the difference between the number of new homes we expect to be added in a given year, and the number that were sold in the previous five years. On average we expect about 110 more new homes to be added annually between 2018 and 2027 than we have seen in the previous five years. The number of students added by level was based on the average of student generation rates for surrounding Districts (Appendix A). We made some final adjustments to insure that the forecast aligns reasonably well with the average of the final forecasts on page 46.

Methodology for the Forecast

Low and High Alternatives

Our main forecast assume that population and housing growth will occur at a certain pace over the course of the forecast. We also created low and high alternatives to our main forecast which show what might happen if population growth and housing development were to proceed at a slower or faster pace than what we have assumed in our main forecast.

Final Considerations

There is every reason to think that enrollment will grow at a rapid pace over the next decade. Pierce County population is increasing rapidly, the Puget Sound economy is strong and continues to bring new residents to the region, there are a substantial number of new developments in the housing pipeline, and the classes eligible for kindergarten in future years are the largest we have seen in decades. In spite of these factors, it is still possible that growth could slow or proceed at a slower pace. Economic growth could slow, the housing market could experience a lull, and it is even possible the future birth cohorts will be smaller than we expect. The low, medium, and high forecasts represent three plausible outcomes. The District's enrollment in a decade could be as low as 4,300 students or as high as 5,000 students. The medium range forecast is our best estimate but we recommend that these forecasts be updated periodically to take advantage of new demographic and enrollment information.

Methodology for the Forecast

Final Considerations Continued

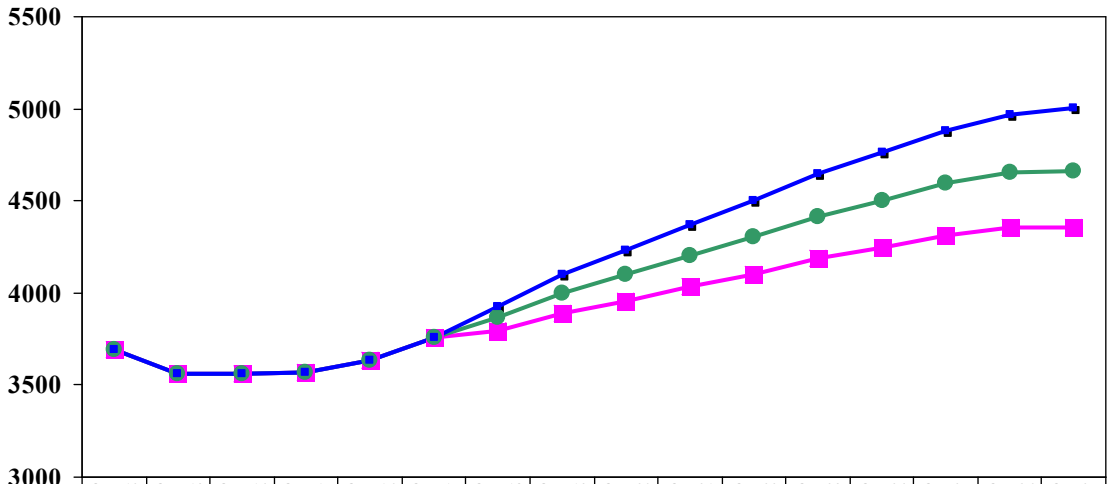
We should also note that our recommended forecast assumes continued growth over the decade with no declines or slowing of the growth trend until we reach the last years few of the forecast. In those years, the large graduating classes start to moderate the overall growth trend.

It is also realistic to think that there could be pauses in the development of housing over time. This could well result in years where the enrollment declines or grows very little, even in the early part of the forecast. But we expect such pauses, if they occur, to be followed by increased development and enrollment gains as different projects reach the completion stage. There should be an overall upward trend in enrollment over the decade, but this does not mean that the trend line will exactly match the trend line assumed in our forecast. Rather, we expect enrollment to trend toward 4,600 over the decade (in our medium range forecast) or closer to low or high range if housing and population growth were to proceed at a slower or faster pace than we have assumed in our medium range model.

General Assumptions

- **Medium Recommended Forecast**
  - **Approximately 180 new housing units will be added annually between now and 2027**
  - **Population growth of just under 2% annually**
  - **The District K-12 population will grow at a faster rate than the overall County K-12 population.**
- **Low Range Forecast**
  - **Approximately 80 new housing units will be added annually between now and 2027**
  - **Population growth of about 1.4% annually**
  - **The District K-12 population will grow at about the same rate as the Overall County K-12 population.**
- **High Range Forecast**
  - **Approximately 260 new housing units will be added annually between now and 2027**
  - **Population growth of about 2.6% annually**
  - **The District K-12 population will grow at rate similar to what we saw in the early 2000's. During that time the District saw a sharp increase in its K-12 market share.**

White River October Enrollment Projection
Headcount (2018 to 2027)
Low, Medium and High



	Oct_12	Oct_13	Oct_14	Oct_15	Oct_16	Oct_17	Oct_18	Oct_19	Oct_20	Oct 21	Oct 22	Oct 23	Oct-24	Oct-25	Oct-26	Oct-27
Low Growth	3694	3564	3558	3567	3631	3757	3791	3891	3956	4032	4099	4185	4245	4314	4358	4356
Medium	3694	3564	3558	3567	3631	3757	3868	4002	4100	4206	4302	4416	4500	4593	4654	4662
High Growth	3694	3564	3558	3567	3631	3757	3928	4098	4231	4373	4502	4648	4761	4881	4966	5001

District Projection
2018-2027
Detailed Numbers
October Projection
Medium Recommended Projection

Enrollment History: October

White River School District

Enrollment History

Birth Year	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Births	10228	9763	9400	9620	9730	9730	9939	10174	10052	10031	10085	10278	10469	11139	11,391	11537	11636	10668	11240	11285
Pct of Cohort	2.47%	2.46%	2.98%	2.69%	2.93%	2.95%	2.93%	2.98%	2.80%	2.79%	2.33%	2.79%	2.66%	2.62%	2.77%	2.90%	2.76%	3.22%	3.06%	3.21%
Rolling Average																				
GRADE	Oct-98	Oct-99	Oct00	Oct01	Oct02	Oct03	Oct04	Oct05	Oct06	Oct07	Oct08	Oct09	Oct10	Oct11	Oct12	Oct13	Oct14	Oct15	Oct16	Oct17
K	253	240	280	259	285	287	291	303	281	280	235	287	278	292	315	334	321	344	344	362
1	305	288	272	295	277	273	304	294	314	311	281	245	254	242	237	242	259	260	252	290
2	299	312	301	282	286	283	271	305	288	303	304	274	239	248	242	247	245	261	293	260
3	273	311	321	312	291	279	285	297	317	286	284	295	270	246	253	240	247	251	277	333
4	298	282	327	339	326	310	312	306	308	325	304	274	300	266	242	264	242	250	263	288
5	307	304	306	323	353	310	315	329	297	305	311	301	280	293	272	239	265	251	276	271
6	288	323	296	317	330	355	326	326	341	313	302	303	294	276	293	270	243	254	253	283
7	332	303	367	340	349	345	386	334	332	350	318	309	301	292	272	287	268	255	260	256
8	314	346	315	368	338	362	374	396	343	355	362	319	298	295	290	273	289	272	258	273
9	377	413	427	422	450	458	454	486	452	396	356	361	331	318	302	288	297	302	290	289
10	357	375	381	437	399	462	419	408	455	449	399	373	371	337	317	294	292	296	294	297
11	294	342	349	322	367	339	396	342	367	372	415	365	395	353	306	294	284	293	289	273
12	294	252	257	288	320	349	290	335	342	325	365	412	416	417	353	292	306	278	282	282
Total	**3991**	**4091**	**4199**	**4304**	**4371**	**4412**	**4423**	**4461**	**4437**	**4370**	**4236**	**4118**	**4027**	**3875**	**3694**	**3564**	**3558**	**3567**	**3631**	**3757**
Enroll Growth		100	108	105	67	41	11	38	-24	-67	-134	-118	-91	-152	-181	-130	-6	9	64	126
Percent Growth		2.5%	2.6%	2.5%	1.6%	0.9%	0.2%	0.9%	-0.5%	-1.5%	-3.1%	-2.8%	-2.2%	-3.8%	-4.7%	-3.5%	-0.2%	0.3%	1.8%	3.5%
K-5	1735	1737	1807	1810	1818	1742	1778	1834	1805	1810	1719	1676	1621	1587	1561	1566	1579	1617	1705	1804
6-8	934	972	978	1025	1017	1062	1086	1056	1016	1018	982	931	893	863	855	830	800	781	771	812
9-12	1322	1382	1414	1469	1536	1608	1559	1571	1616	1542	1535	1511	1513	1425	1278	1168	1179	1169	1155	1141

Recommended Medium Range Projection

October Headcount Projection (Medium)

Cohort Forecast Adjusted for Housing ***Projected Births***

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	11,115	11,664	11,415	11,757	11,717	11,737	11,760	11,785	11,766	11,748
	3.26%	3.28%	3.20%	3.20%	3.18%	3.17%	3.19%	3.19%	3.18%	3.23%

Grd	Oct18	Oct19	Oct20	Oct21	Oct22	Oct23	Oct24	Oct25	Oct26	Oct27
K	362	383	366	376	373	372	375	376	374	379
1	289	289	306	291	300	297	296	298	301	299
2	309	307	307	323	308	317	314	313	317	319
3	286	327	325	324	341	325	334	331	332	335
4	347	299	342	339	338	356	339	348	347	347
5	306	364	314	357	354	353	371	354	365	363
6	275	309	367	316	359	356	355	373	356	367
7	287	281	315	373	322	365	362	361	380	362
8	265	295	289	323	381	329	374	370	370	388
9	299	284	316	308	344	406	351	398	394	394
10	291	300	285	316	308	344	406	351	397	394
11	286	282	290	275	304	296	331	391	338	383
12	267	283	279	286	271	300	292	326	385	333
Tot	**3868**	**4002**	**4100**	**4206**	**4302**	**4416**	**4500**	**4593**	**4654**	**4662**
Enroll Growth	111	134	98	106	96	114	84	93	61	8
% Change	3.0%	3.5%	2.4%	2.6%	2.3%	2.6%	1.9%	2.1%	1.3%	0.2%
K-5	1898	1969	1960	2011	2014	2020	2030	2022	2034	2042
6-8	827	885	971	1012	1062	1050	1091	1105	1106	1118
9-12	1142	1148	1169	1184	1226	1346	1380	1465	1514	1503

Low Projection

Low Range Projection

Cohort Forecast Adjusted for Housing ***Projected Births***

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	11,115	11,664	11,415	11,757	11,717	11,737	11,760	11,785	11,766	11,748
	3.19%	3.25%	3.17%	3.17%	3.15%	3.13%	3.15%	3.16%	3.15%	3.19%

Grd	Oct18	Oct19	Oct20	Oct21	Oct22	Oct23	Oct24	Oct25	Oct26	Oct27
K	355	379	362	372	369	368	371	373	370	375
1	283	281	300	286	294	291	290	293	295	293
2	303	298	295	314	299	307	305	304	307	310
3	280	317	312	309	328	313	321	319	319	322
4	340	290	329	323	319	339	323	332	330	330
5	300	353	302	340	334	330	350	334	344	342
6	269	300	352	301	339	332	329	349	333	343
7	282	272	303	355	303	341	335	331	351	335
8	260	287	277	307	359	307	345	339	336	356
9	293	276	303	293	324	379	324	364	358	354
10	285	291	274	300	290	321	375	321	360	354
11	280	273	279	261	286	277	306	357	306	344
12	261	274	268	272	255	280	270	298	349	299
Tot	3791	3891	3956	4032	4099	4185	4245	4314	4358	4356
Enroll Growth	34	100	65	76	67	86	60	69	44	-2
% Change	0.9%	2.6%	1.7%	1.9%	1.7%	2.1%	1.4%	1.6%	1.0%	0.0%
K-5	1860	1918	1900	1943	1943	1948	1960	1954	1965	1973
6-8	811	859	933	963	1001	981	1009	1019	1020	1034
9-12	1120	1114	1124	1126	1155	1256	1275	1341	1373	1350

High Projection

High Range Projection

Cohort Forecast Adjusted for Housing ***Projected Births***

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	11,115	11,664	11,415	11,757	11,717	11,737	11,760	11,785	11,766	11,748
	3.31%	3.32%	3.23%	3.23%	3.21%	3.20%	3.22%	3.23%	3.21%	3.27%

Grd	Oct18	Oct19	Oct20	Oct21	Oct22	Oct23	Oct24	Oct25	Oct26	Oct27
K	367	387	369	380	376	375	378	380	378	384
1	296	297	312	297	306	303	302	304	307	305
2	313	317	318	333	317	326	323	322	326	330
3	290	335	339	339	355	338	348	345	345	350
4	353	307	354	357	357	373	356	366	364	365
5	310	373	325	373	376	376	393	375	387	386
6	279	316	380	330	379	382	382	399	381	394
7	292	288	326	390	339	389	392	392	410	393
8	269	303	299	337	403	351	402	405	405	425
9	303	291	327	322	363	433	377	432	435	437
10	296	307	295	330	325	366	437	381	436	441
11	290	289	300	287	321	316	356	425	370	425
12	271	290	288	299	286	319	314	355	422	370
Tot	**3928**	**4098**	**4231**	**4373**	**4502**	**4648**	**4761**	**4881**	**4966**	**5001**
Enroll Growth	171	170	133	142	129	146	113	120	85	35
% Change	4.6%	4.3%	3.2%	3.4%	2.9%	3.2%	2.4%	2.5%	1.7%	0.7%
K-5	1929	2015	2017	2079	2087	2092	2101	2093	2106	2118
6-8	840	907	1005	1057	1121	1121	1176	1196	1196	1211
9-12	1160	1177	1210	1237	1294	1435	1485	1592	1664	1672

School Projections

Projections by school and grade level were also completed and balanced to the overall District medium range projection. School grade level projections are generally less accurate than District grade level projections due to the smaller numbers used to estimate trends, and because program changes and student choice can affect the allocation of students independent of demographic trends.

Since the District only has one middle school and one high school we are presenting only elementary school projections. The middle and high school projections are reflected in the District enrollments by grade. For the elementary schools the projections are based on the enrollment trends of the past three years and projected growth from new housing development in each service area. At Kindergarten the enrollment reflects each school's projected share of the future kindergarten population based on the average share of recent years and projected growth from new housing. At the continuing grades enrollment is projected based on the average net gain or loss as students move up through the grades and projected growth from new housing. In general schools with the most new housing development will have the highest net gain in enrollment over time, with some variation due to how students typically roll up through the grades. These projections reflect the effect of enrollment trends and future housing development. They can be used to guide adjustment of boundaries or bond planning to accommodate future growth.

Projection Summary by School

Medium Growth Projections (2018-2023)

	Oct13	Oct14	Oct15	Oct16	Oct17	Oct18	Oct19	Oct20	Oct21	Oct22	Oct23
Elk Ridge	336	336	361	410	427	453	472	493	491	490	493
Foothills	502	522	527	547	577	607	632	625	648	664	654
Mountain Meadow	495	488	474	483	512	537	547	529	551	545	556
WILK	233	233	255	265	288	301	318	313	321	316	317
Totals	**1566**	**1579**	**1617**	**1705**	**1804**	**1898**	**1969**	**1960**	**2011**	**2014**	**2020**

Appendix A

Student Generation Rates from Sample Districts

Student Generation Rate Comparison
Students from New Home Development

Student Generation Rates from Sample Districts

Pierce County Sample Districts

	Single-Family				Multi-Family			
	K-5	6-8	9-12	Total	K-5	6-8	9-12	Total
Sumner	0.260	0.126	0.153	0.539	0.080	0.030	0.035	0.145
Bethel	0.355	0.117	0.090	0.562	0.256	0.102	0.106	0.464
Puyallup	0.426	0.189	0.151	0.766	0.080	0.030	0.030	0.140
Average	**0.347**	**0.144**	**0.131**	**0.622**	**0.139**	**0.054**	**0.057**	**0.250**

King County Sample Districts

	Single-Family				Multi-Family			
	K-5	6-8	9-12	Total	K-5	6-8	9-12	Total
Auburn	0.196	0.073	0.094	0.363	0.065	0.038	0.022	0.125
Issaquah	0.473	0.173	0.15	0.796	0.156	0.051	0.049	0.256
Kent	0.257	0.07	0.138	0.465	0.111	0.022	0.039	0.172
LK. Wash.	0.410	0.128	0.099	0.637	0.062	0.016	0.014	0.092
Average	**0.334**	**0.111**	**0.120**	**0.565**	**0.0985**	**0.03175**	**0.031**	**0.161**