

# **Ansonia-Derby Temporary Regional School Study Committee**

## **Demographics and Enrollment**

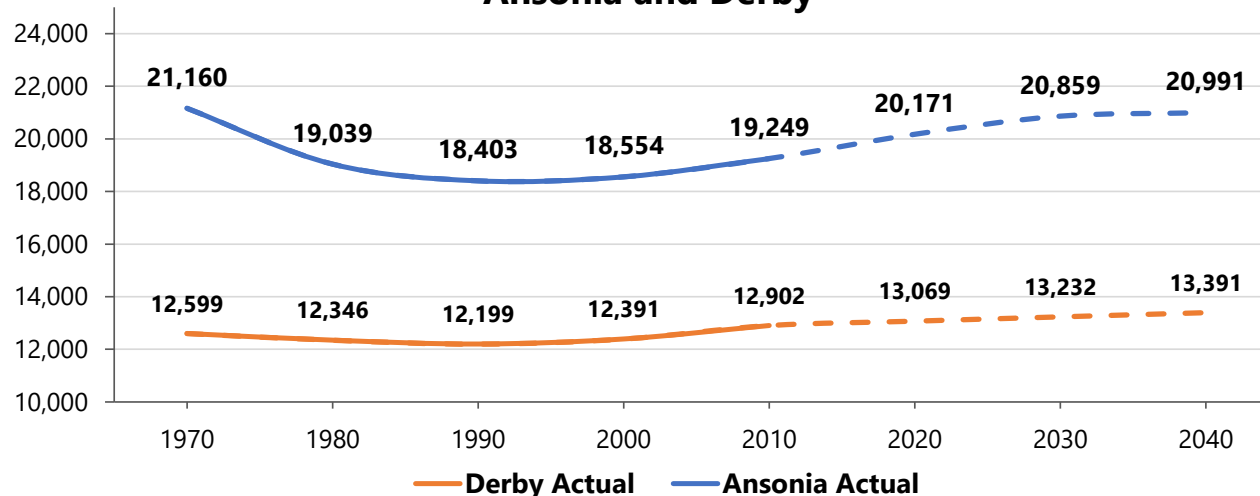


June 2019

- Demographic, Housing and Economic Trends
- Enrollment Trends
- Enrollment Projections
- Long-Range Alternatives
- Recommendations

# Demographics: Total Pop.

**Actual and Projected Populations  
Ansonia and Derby**

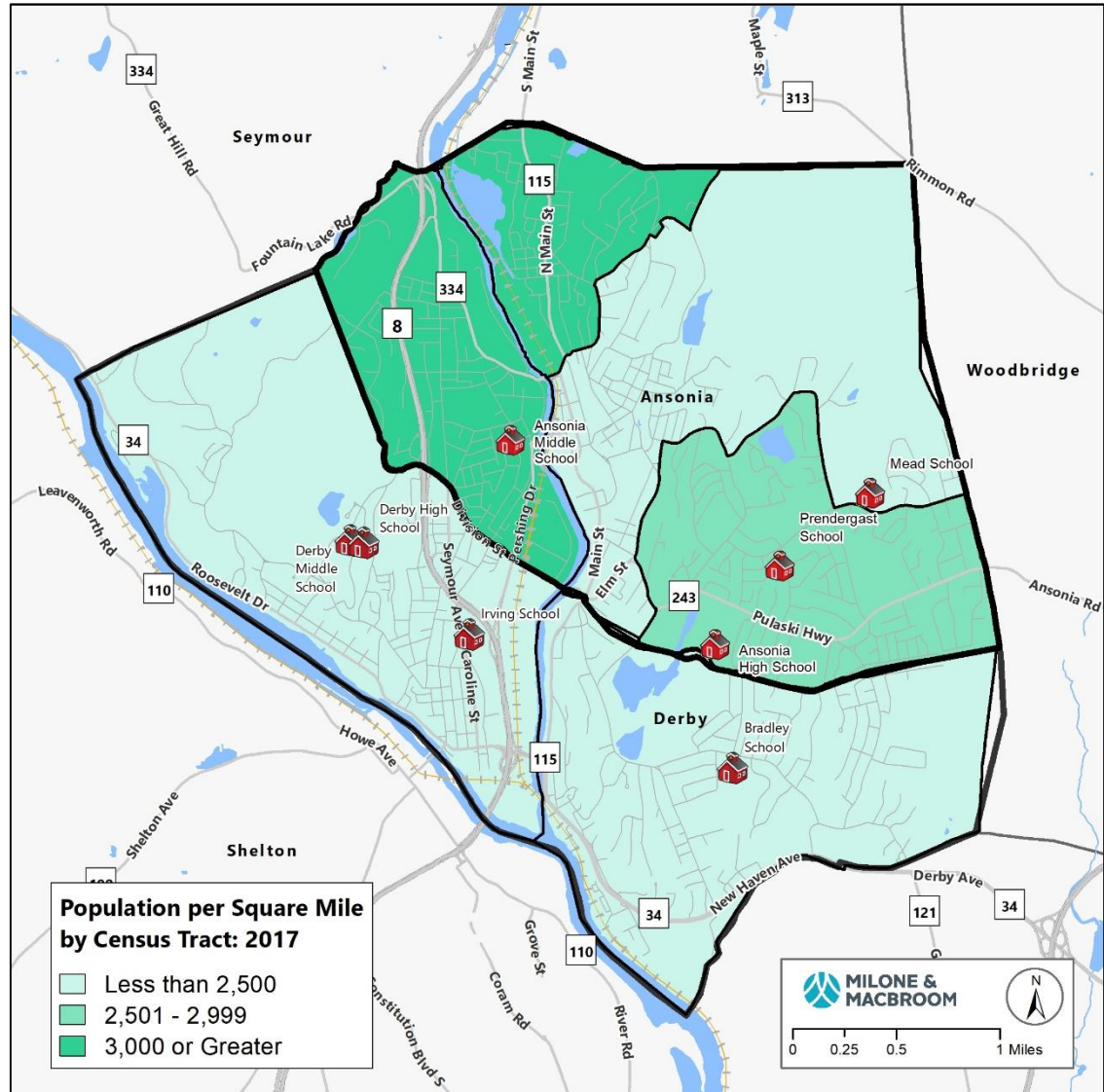


Sources: U.S. Census Bureau, CT DOT

- Both communities experienced a low in total population in 1990 with small increases since then
- Both communities estimated to have relatively stable populations this decade, but not likely to meet CT DOT projections
- 2017 population estimates
  - Ansonia: 18,953
  - Derby: 12,700

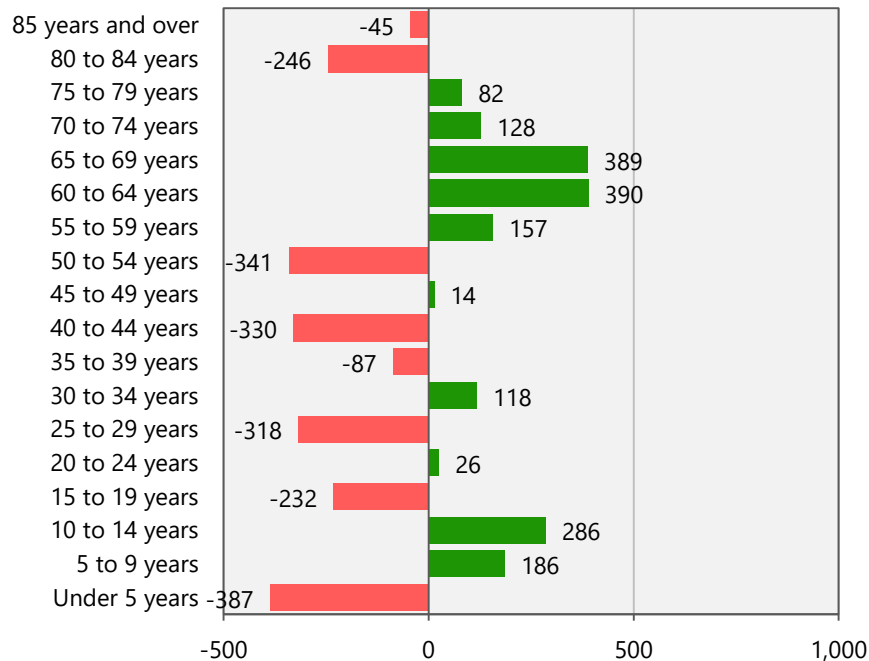
# Demographics: Pop. Density

- Both communities have more dense cores and more suburban areas
- However, due to features such as Osbornedale Park in Derby, only Ansonia reported to have more urban levels of population density



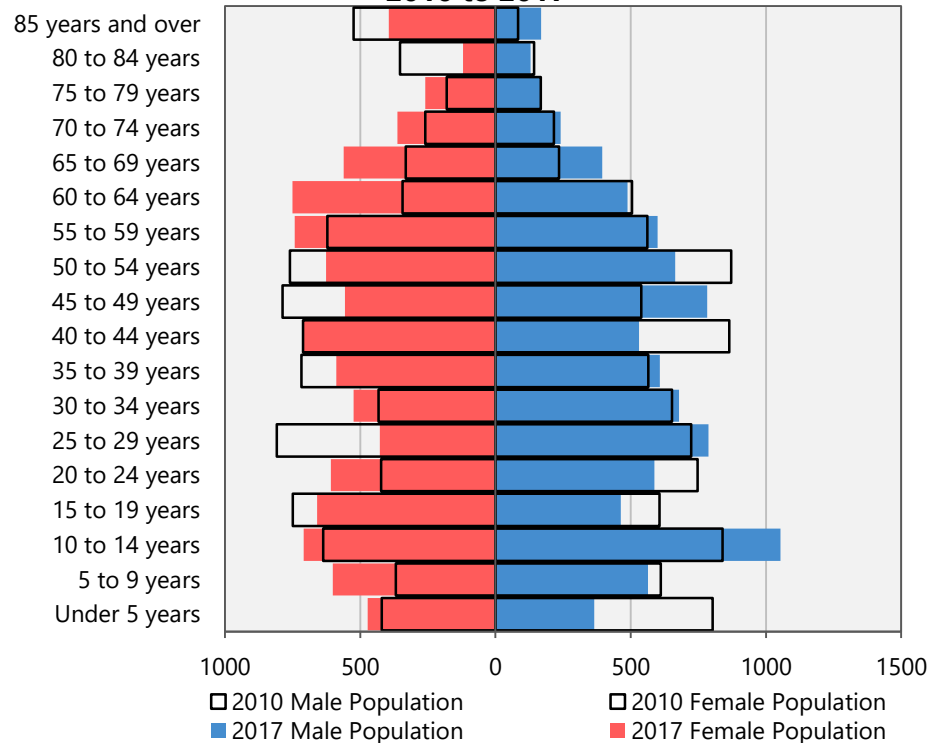
# Demographics: Ansonia Age Dist.

**Ansonia Population Change, by Age Group  
2010 to 2017**



Source: ACS 2010 (5-YR), ACS 2017 (5-YR)

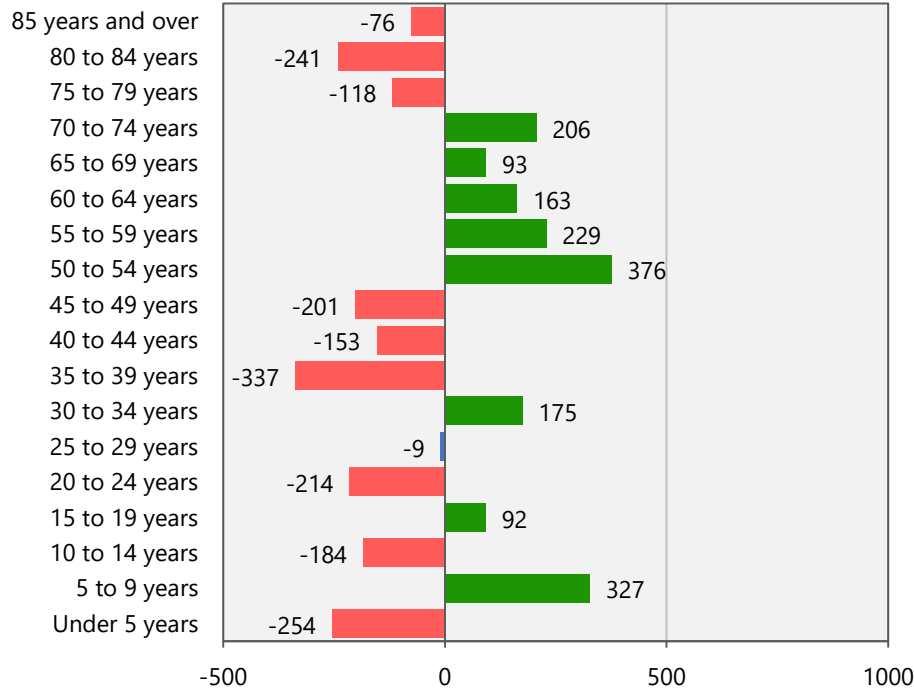
**Ansonia Population, by Age Group  
2010 to 2017**



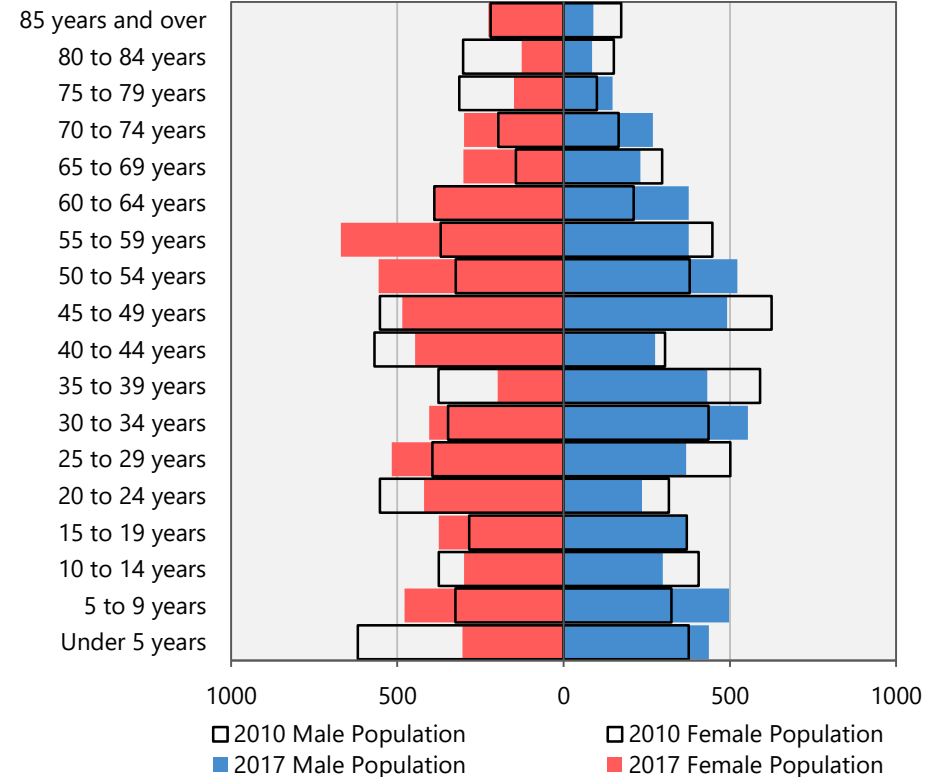
- Decrease in children under 5 years, though large spike in 10 to 14 age group
- Ansonia saw an increase in ages between 55 and 79, primarily because of baby boomer generation

# Demographics: Derby Age Dist.

**Derby Population Change, by Age Group  
2010 to 2017**



**Derby Population, by Age Group  
2010 to 2017**



Source: ACS 2010 (5-YR), ACS 2017 (5-YR)

- Similar decrease in children under 5; however, spike in 5-9 year olds
- Derby saw an increase in 50-74 year age group primarily because of baby boomer generation

# Demographics: School Age Pop.

**School Aged (5-17) Population Change**

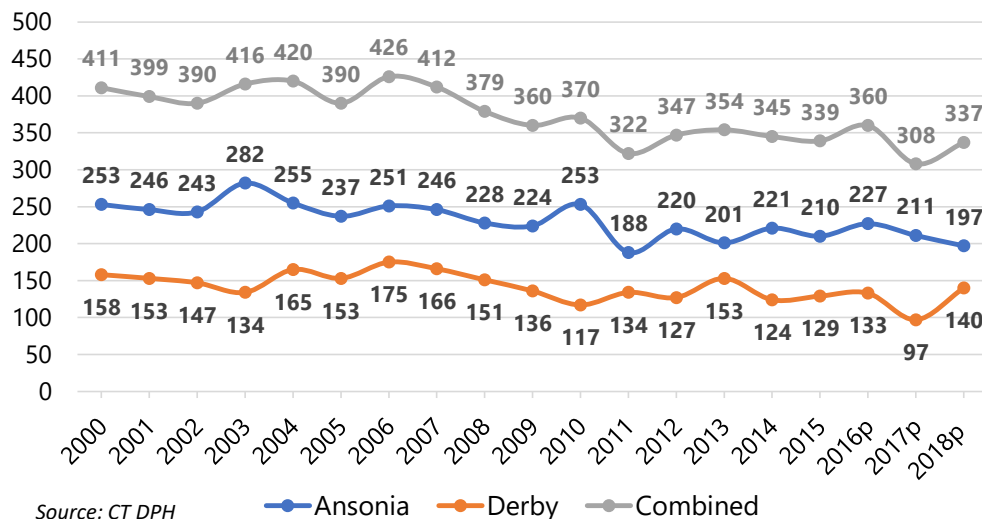
<b>Town</b>	<b>2010</b>	<b>2017</b>	<b>Net Change</b>	<b>% Change</b>
Ansonia	3,314	3,540	226	6.8%
Derby	1,803	2,125	322	17.9%
<b>Total</b>	<b>5,117</b>	<b>5,665</b>	<b>548</b>	<b>10.7%</b>

Source: ACS 2010 (5-YR), ACS 2017 (5-YR)

- Both communities are estimated to have experienced an increase in school aged population (not necessarily students) this decade
- Derby experienced a greater increase
- Collectively, there was a 10.7% increase, about 450 children

# Demographics: Births

**Annual Births to Resident Mothers  
2000 - 2018**



- 2017 and 2018 data still preliminary
- Ansonia births peaked in the early 2000s, but has had a relatively stable average of 213 annual births over the last 5 years
  - This average rate is about 15% below peak levels
- Derby births peaked in the mid-2000s, although it experienced an unusual spike in 2013 and an unusual dip in 2017
  - Averaging about 20-22% below peak levels



# Demographics: Households

**Ansonia Households by Type - 2017**

Household Type	Estimate	% of Total Households
<b>Total Households</b>	<b>6,981</b>	<b>100%</b>
Average Household Size	2.71	
With Own Children Under 18 Years	1,804	26%
<b>Married Couple Families</b>	<b>2,815</b>	<b>40%</b>
Average Household Size	3.67	
With Own Children Under 18 Years	1,135	16%
Under 6 Years	224	3%
Under 6 and 6 to 17 Years	309	4%
6 to 17 Years Only	602	
<b>Female Householder, No Husband</b>	<b>1,270</b>	<b>18%</b>
Average Household Size	3.33	
With Own Children Under 18 Years	530	8%
Under 6 Years	79	1%
Under 6 and 6 to 17 Years	55	1%
6 to 17 Years Only	396	
<b>Nonfamily Households</b>	<b>2,477</b>	<b>35%</b>
Average Household Size	1.17	
Household Living Alone	2,170	31%

Source: 5-YR American Community Survey 2013-2017

**Derby Households by Type - 2017**

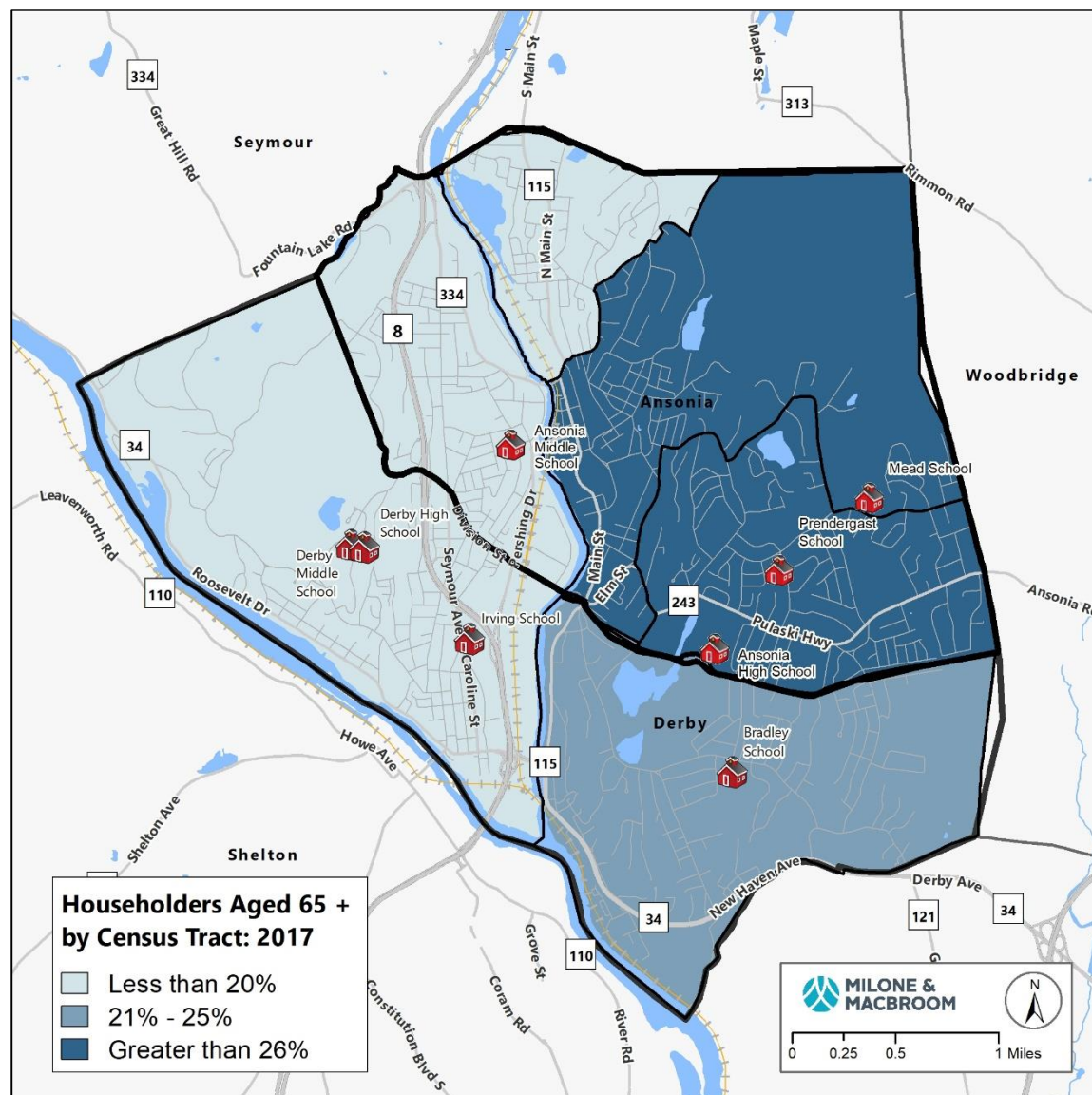
Household Type	Estimate	% of Total Households
<b>Total Households</b>	<b>4,919</b>	<b>100%</b>
Average Household Size	2.53	
With Own Children Under 18 Years	1,125	23%
<b>Married Couple Families</b>	<b>1,962</b>	<b>40%</b>
Average Household Size	3.25	
With Own Children Under 18 Years	648	13%
Under 6 Years	83	2%
Under 6 and 6 to 17 Years	112	2%
6 to 17 Years Only	453	
<b>Female Householder, No Husband</b>	<b>710</b>	<b>14%</b>
Average Household Size	3.68	
With Own Children Under 18 Years	407	8%
Under 6 Years	93	2%
Under 6 and 6 to 17 Years	145	3%
6 to 17 Years Only	169	
<b>Nonfamily Households</b>	<b>2,019</b>	<b>41%</b>
Average Household Size	1.26	
Household Living Alone	1,657	34%

Source: 5-YR American Community Survey 2013-2017

- Very similar household compositions
  - About a quarter of all households have own children under the age of 18
  - About 40% of all households are married couple families
  - Slightly more non-family households in Derby – correlate with aging profile

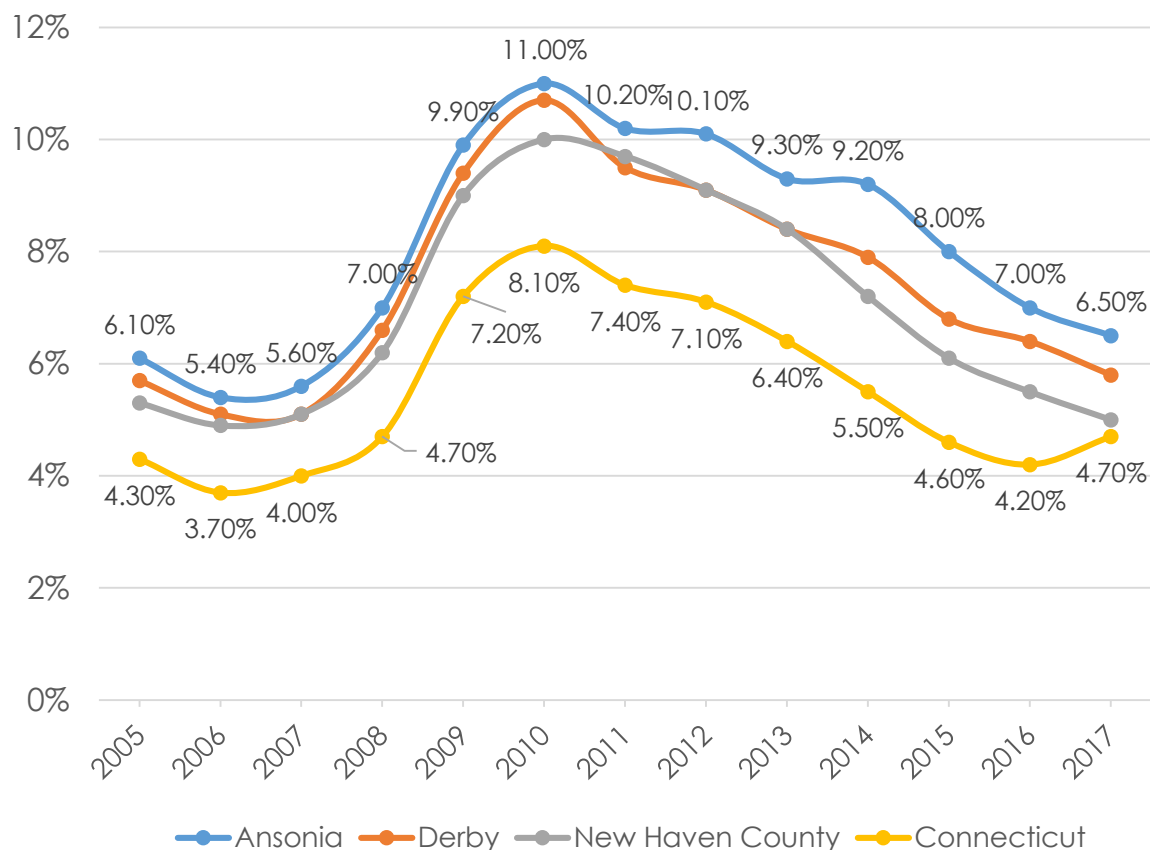
# Housing: Householders Age 65+

- Derby has more than twice as many householders over age 65 on the eastern side of town
- Housing stock ripe for turnover
- Also more single-family housing units on this side of Derby
- In Ansonia, about 25% of all households are headed by a resident age 65+
- Also highest in eastern part of City with higher numbers of single-family housing units



- Unemployment rates mimic State and County trends, though higher in both cities
- Recovery is back to pre-recession levels
- Ansonia consistently slightly higher unemployment than Derby

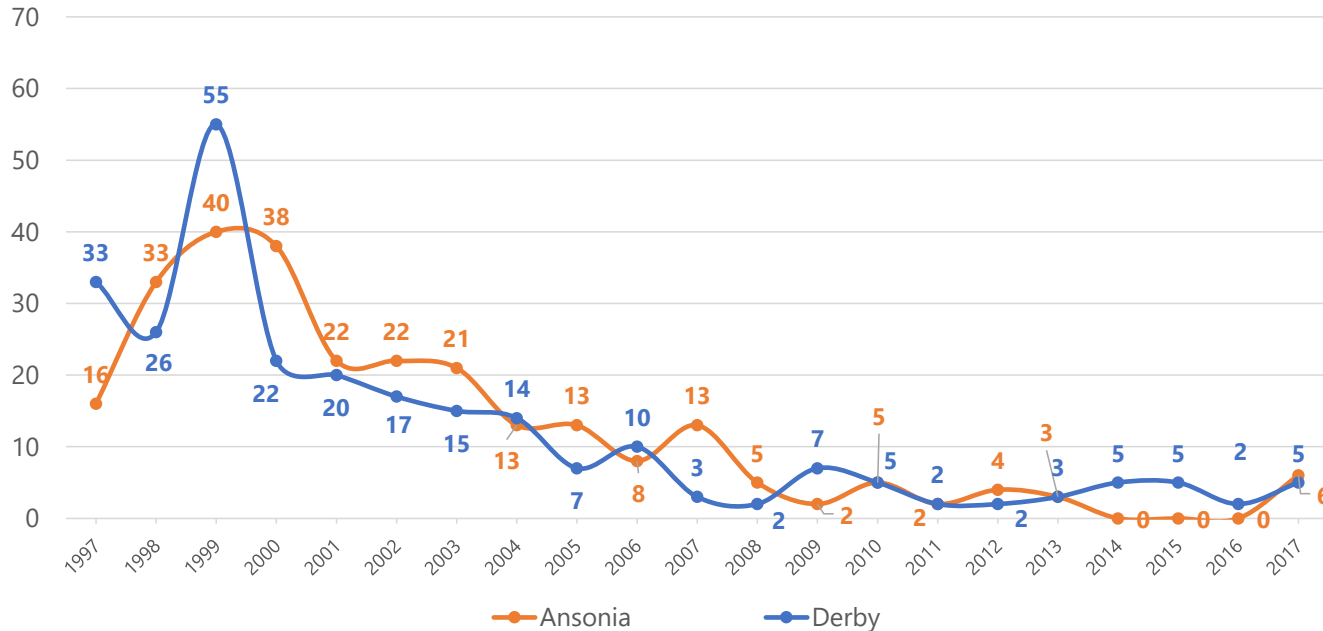
**Ansonia, Derby, New Haven County and CT  
Unemployment Rates**



Source: CT DOL

# Housing: Permits

**Ansonia and Derby Housing Permits 1997 - 2017**

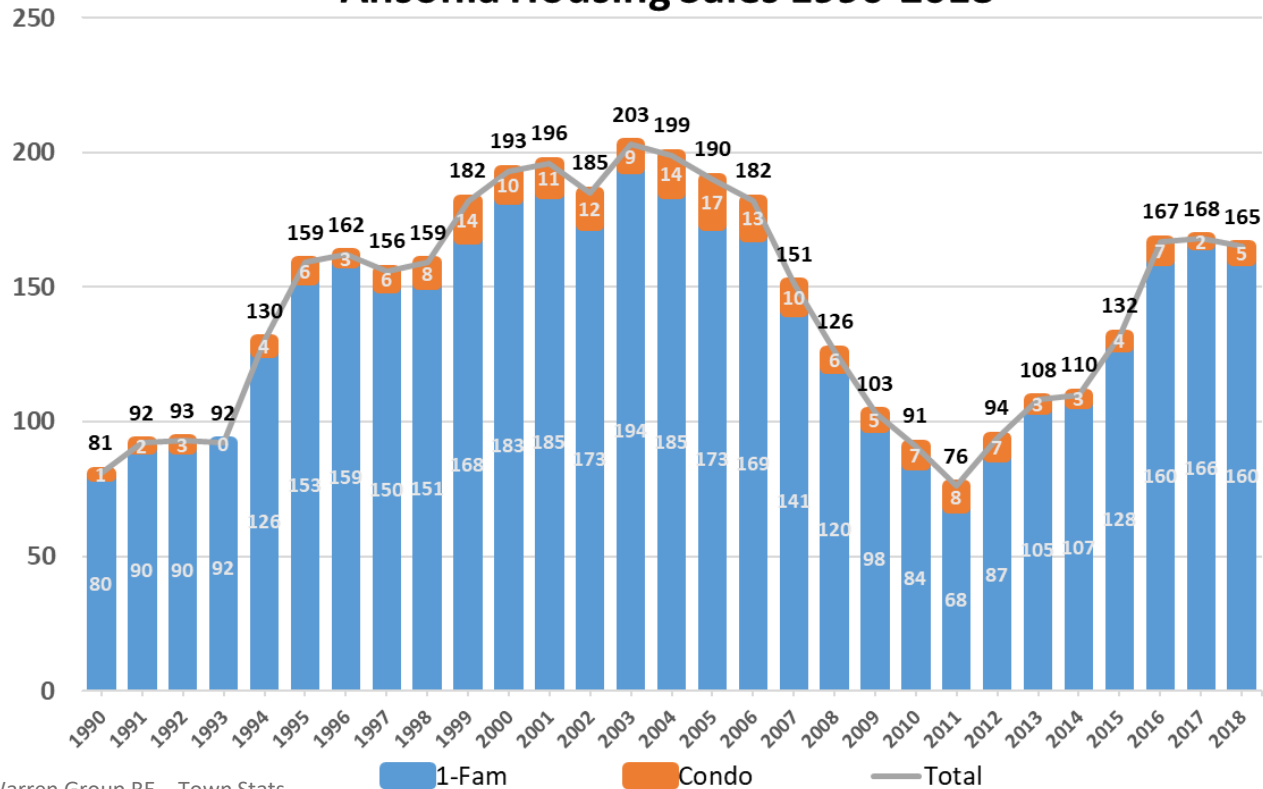


Source: CT DECD

- Permitting remains at low levels over past decade
- Spikes in the late 1990s
- Communities are largely built out – new housing will be redevelopment

# Housing: Ansonia Sales

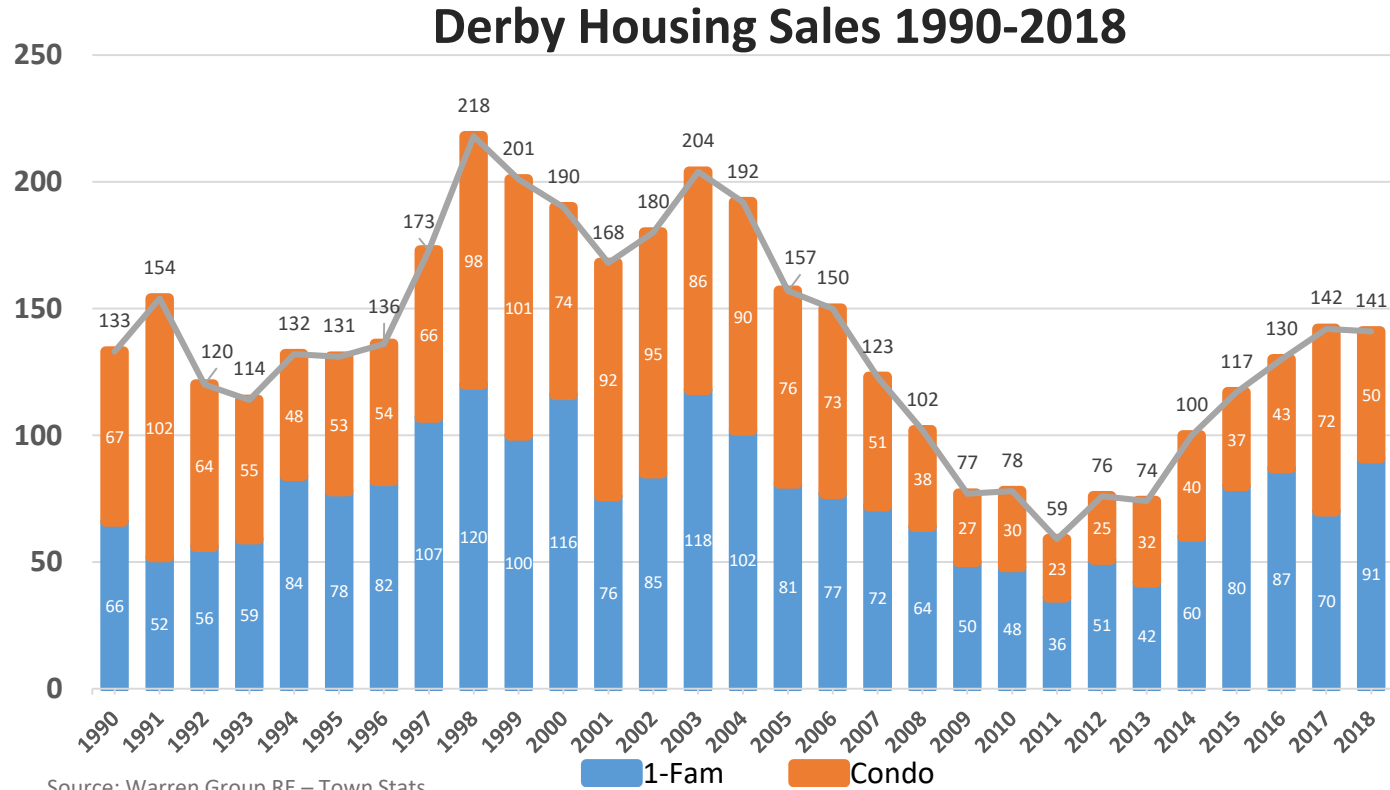
Ansonia Housing Sales 1990-2018



Source: Warren Group RE – Town Stats

- Housing sales are primarily single-family home sales
- Sales started to decline prior to Recession
- Slow recovery from Recession, but experienced strongest sales in a decade the last three years

# Housing: Derby Sales

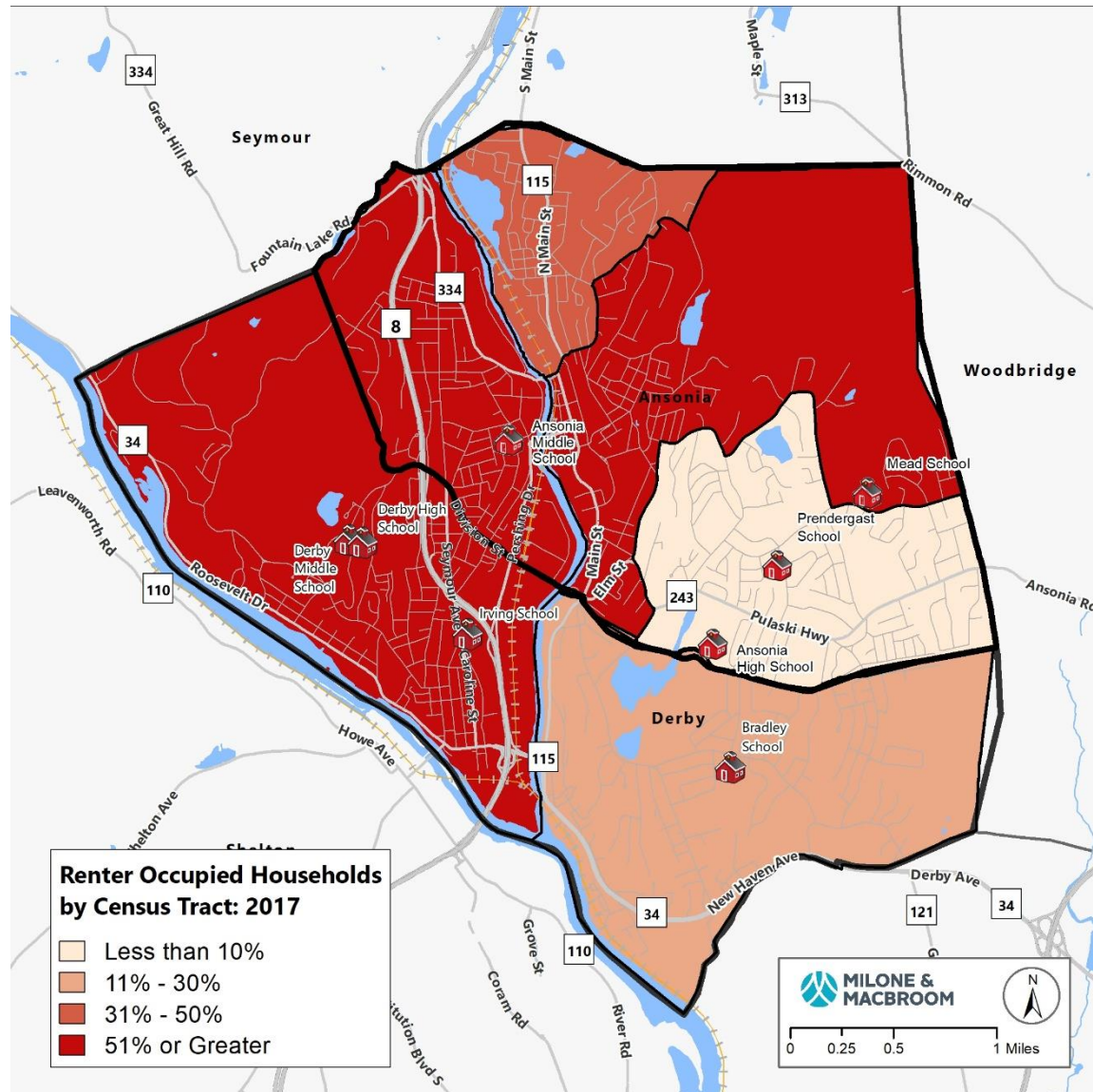


- Condo unit sales are an important component of local housing market – make up about 40% of all sales over the last decade
- Recovery from Recession began in 2012, appears to be plateauing

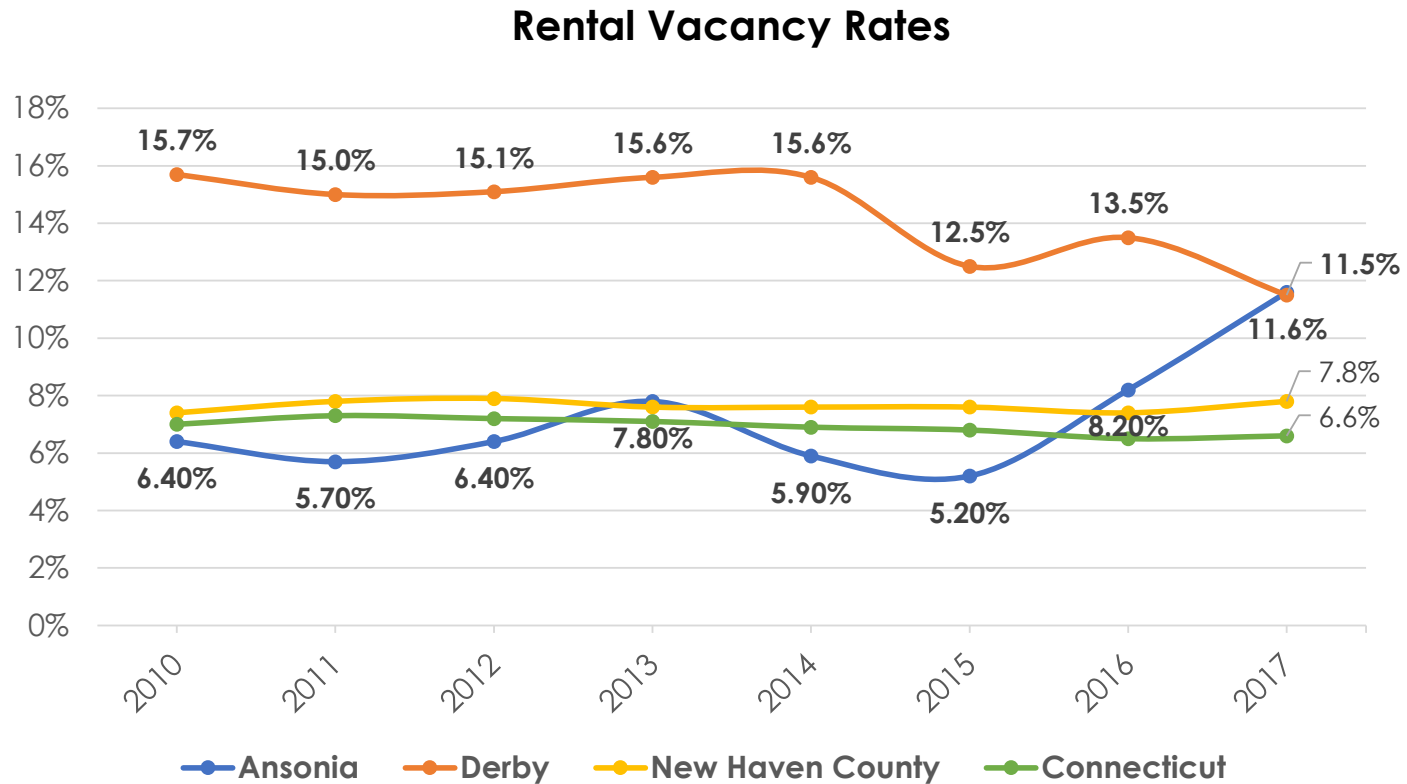


# Housing: Rental Units

- Similar rental occupancy rates
  - 40% of housing units in Ansonia
  - 43% of housing units in Derby
- Significant stock of duplex, three- and four-family homes concentrated in Route 8 corridor



# Housing: Rental Vacancy Rates



Source: ACS 2010 through 2017 (5-YR)

- Estimated rental vacancy rates for Derby significantly higher than those of Ansonia, the County or State
- Estimated significant increase in Ansonia rental vacancy rates recently



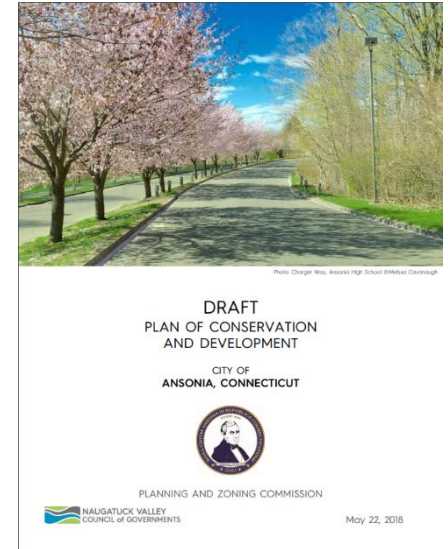
# Housing: Plans for Growth

- Ansonia Key Issues:

- Maintaining residential areas
- Focus on Downtown – business and social center, incorporate housing
- Mixed-use development of industrial/brownfield sites

- Derby Key Issues

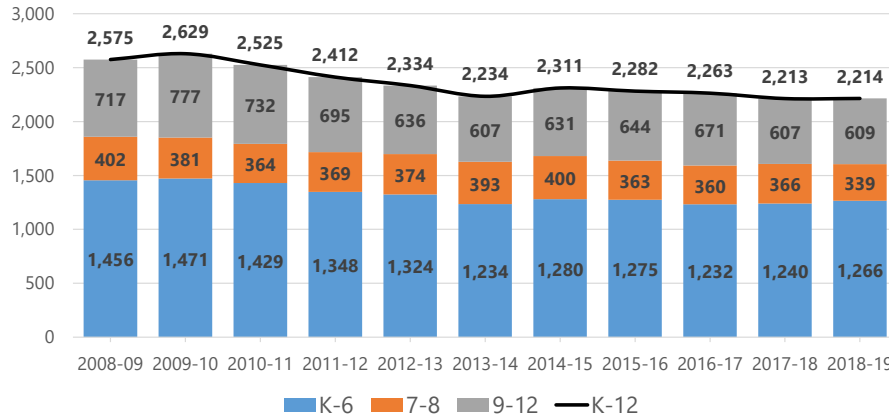
- Encourage more owner occupied housing
- Provide more housing for seniors and young professionals
- Support and promote adaptive reuse of former industrial buildings for residential/or commercial activities
- Renovate to improve the condition and quality of housing



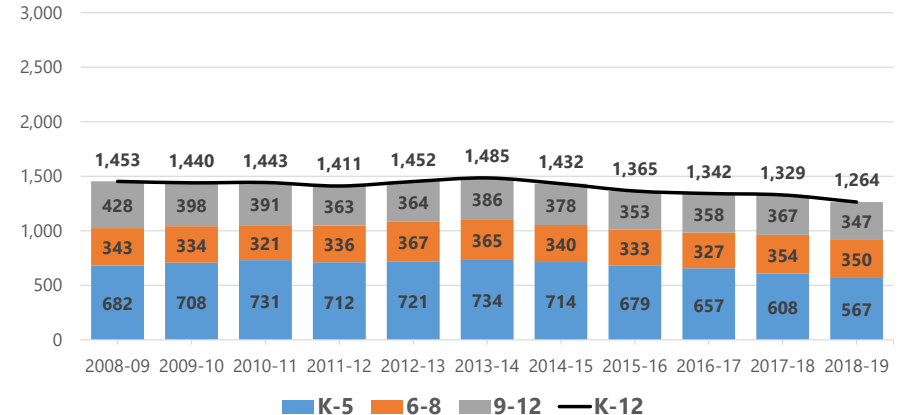
# Enrollment

# Enrollment: District-Wide

**Ansonia Public Schools K-12 Enrollment**



**Derby Public Schools K-12 Enrollment**

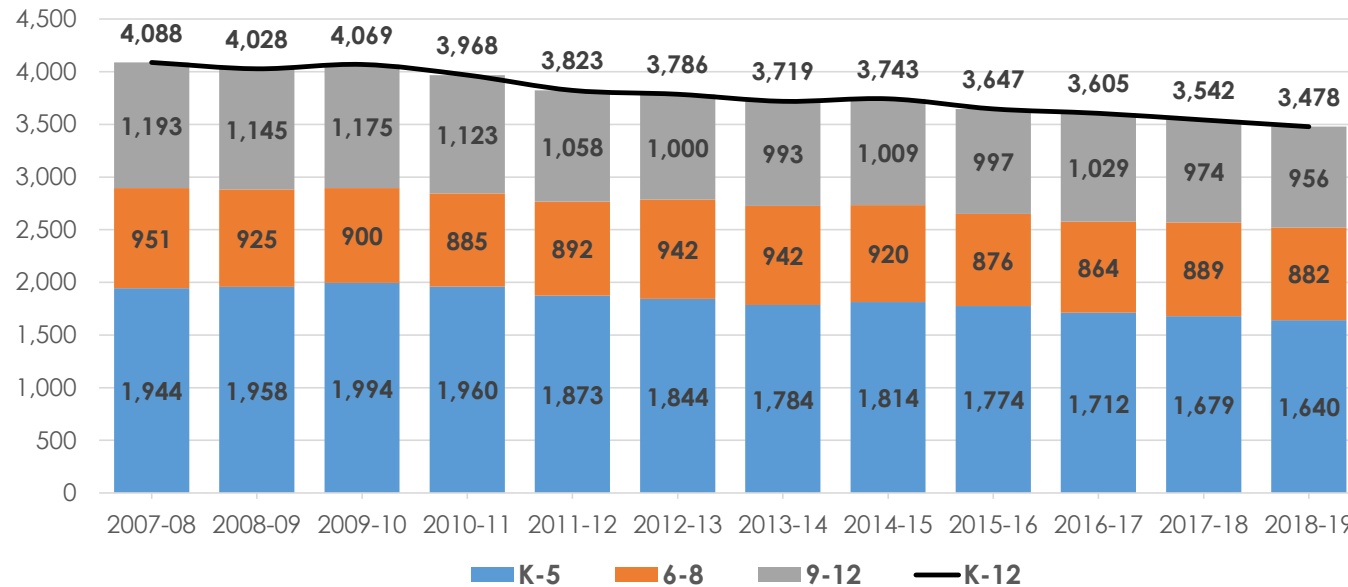


Sources: CT Department of Education EdSight, Ansonia and Derby Public Schools

- Ansonia K-12 enrollment has decreased 14% over the last decade; however, decrease of less than 1% over the last five years
  - Elementary enrollments (K-6) increased 3% over the last three years
- Derby K-12 enrollment has decreased 13% over the last decade; the decrease over the last five years is 15%
  - 23% loss in K-5 over the last five years – unusual drop in 18-19
  - 10% decrease in high school enrollment over the past five years – unusual drop in 18-19

# Enrollment: Combined History

Combined Ansonia-Derby K-12 Enrollment History

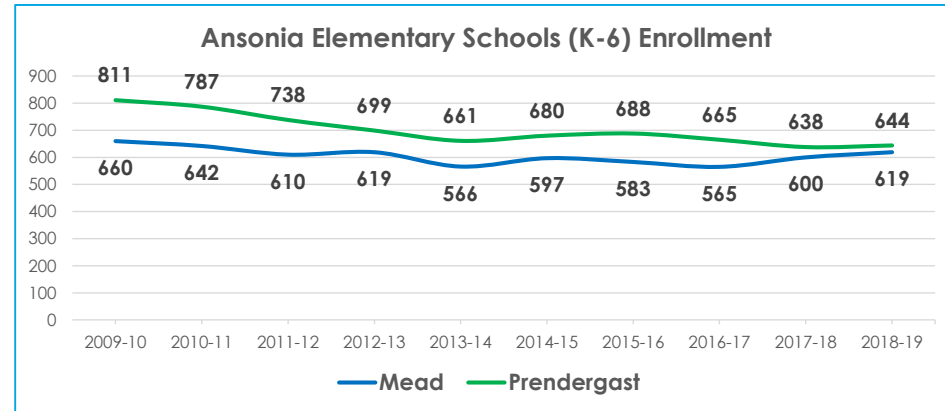


- Combined K-12 enrollment decrease of 13% over the last decade and 6% over last five years
- Combined elementary (K-5) decrease of 14% over last ten years and 9% over the last five years
- Combined middle (6-8) decrease of 7% over last decade and 6% over last five years
- Combined high school decrease of 18% over last decade and 3% over last five years

# Enrollment: Ansonia Schools

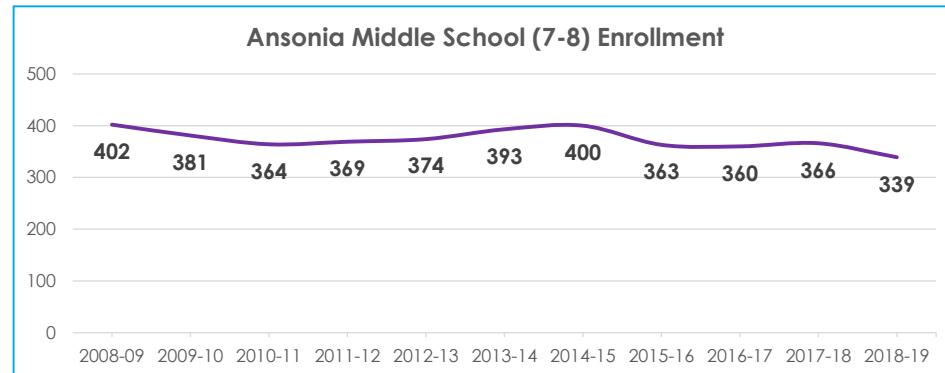
## Elementary (K-6)

- District placement into schools, rather than assigned catchment area
- Traditional gap of about 100 students narrowed over last two years
- PreK located at Middle School



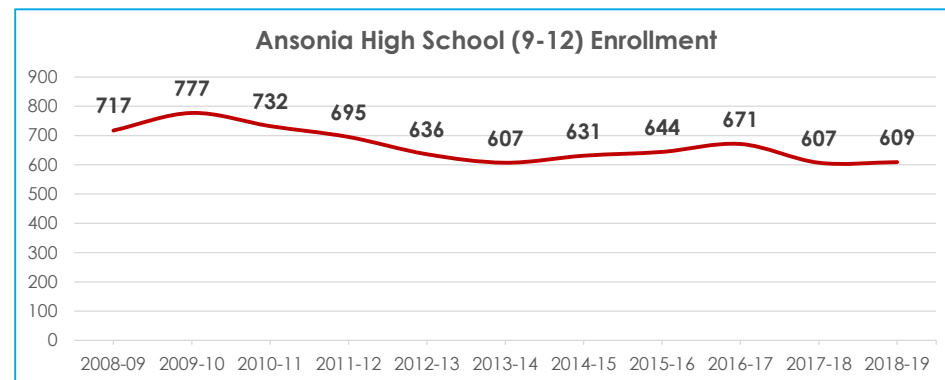
## Middle (7-8)

- With only two grades subject to fluctuations due to cohort size
- Relatively stable until unusually small 7<sup>th</sup> grade cohort entered this year



## High (9-12)

- As large class of '19 class has matriculated through, stable enrollments
- Current 10<sup>th</sup> grade cohort unusually small – slight declines of last 2 years



# Enrollment: Ansonia Schools

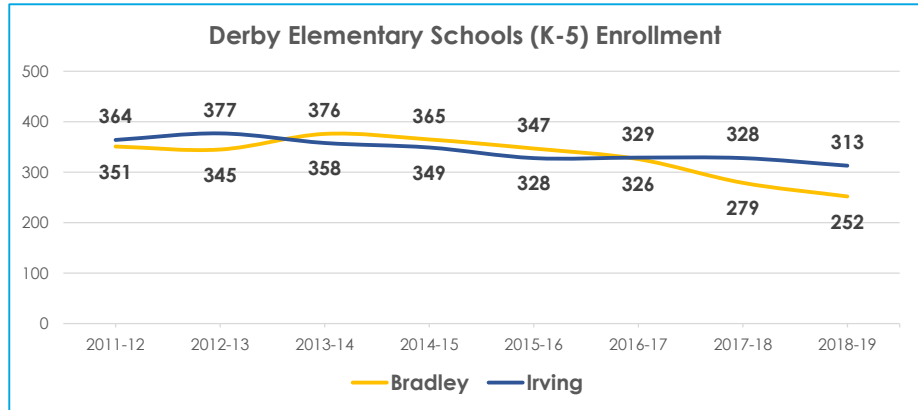
School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	K-6	7-8	9-12	K-12	PK-12
2001-02	1996	246	208	219	203	219	237	239	215	191	210	187	180	149	121		1,540	401	637	2,578	2,578
2002-03	1997	240	190	212	210	206	233	217	235	212	191	190	161	162	124		1,503	403	637	2,543	2,543
2003-04	1998	246	224	200	201	219	220	218	234	233	221	179	177	154	158		1,516	454	668	2,638	2,638
2004-05	1999	249	235	224	202	206	217	228	209	255	224	201	167	172	141		1,521	479	681	2,681	2,681
2005-06	2000	253	249	234	182	208	197	209	218	204	249	228	179	149	144		1,497	453	700	2,650	2,650
2006-07	2001	246	234	259	220	184	199	191	214	200	204	250	187	168	133		1,501	404	738	2,643	2,643
2007-08	2002	243	229	234	233	223	190	186	182	203	211	239	184	174	162		1,477	414	759	2,650	2,650
2008-09	2003	282	224	233	203	216	216	184	180	191	211	233	175	152	157		1,456	402	717	2,575	2,575
2009-10	2004	255	199	249	199	213	218	208	185	184	197	246	206	165	160		1,471	381	777	2,629	2,629
2010-11	2005	237	204	213	201	193	215	203	200	180	184	206	207	173	146		1,429	364	732	2,525	2,525
2011-12	2006	251	174	212	194	189	188	204	187	187	182	188	157	174	176		1,348	369	695	2,412	2,412
2012-13	2007	246	176	199	181	193	188	186	201	185	189	172	158	132	174	91	1,324	374	636	2,334	2,425
2013-14	2008	228	165	193	169	177	168	178	184	205	188	184	147	139	137	104	1,234	393	607	2,234	2,338
2014-15	2009	224	197	192	176	170	183	182	180	189	211	170	187	132	142	104	1,280	400	631	2,311	2,415
2015-16	2010	253	206	191	173	172	169	184	180	172	191	192	169	160	123	100	1,275	363	644	2,282	2,382
2016-17	2011	188	180	185	176	167	178	169	177	185	175	171	194	147	159	101	1,232	360	671	2,263	2,364
2017-18	2012	220	177	177	175	180	179	183	169	178	188	132	168	168	139	91	1,240	366	607	2,213	2,304
2018-19	2013	201	175	196	174	171	180	177	193	166	173	165	122	157	165	110	1,266	339	609	2,214	2,324

- Compounding affects of smaller incoming grade cohorts
- Transiency evident with fluctuating cohort sizes as they matriculate through system
- As of 2017-18, about 280 resident high school students attending CT Technical High School, New Haven Magnet or other public schools

# Enrollment: Derby Schools

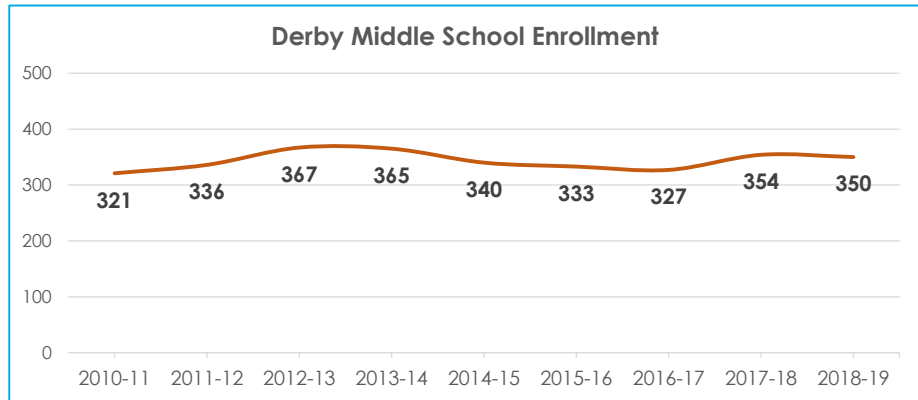
## Elementary (K-5)

- Irving (western side) steady enrollment the last three years
- Bradley experienced significant decrease over the past two years



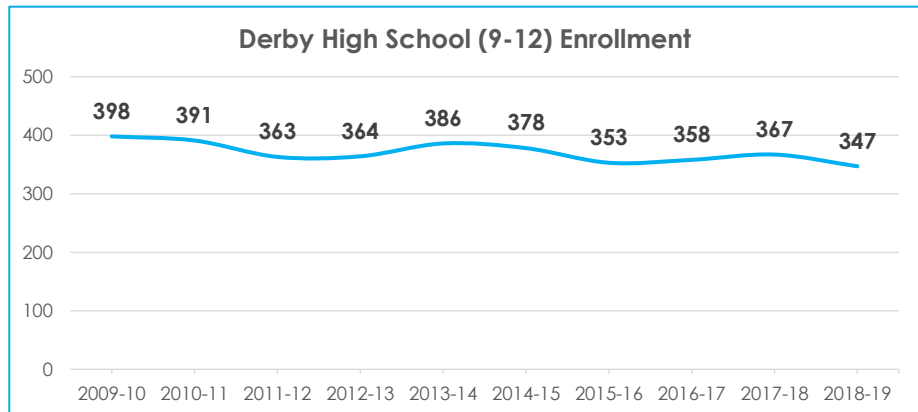
## Middle (6-8)

- Relatively stable over the last three years; however some smaller grade cohorts have yet to matriculate to middle school



## High (9-12)

- Stable enrollment from 2015-16 to 2017-18
- Unusually small incoming 9<sup>th</sup> grade cohort



# Enrollment: Derby Schools

School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	K-5	6-8	9-12	K-12	PK-12
2007-08	2002	147	92	121	133	98	88	117	113	109	133	114	108	108	104	34	649	355	434	1,438	1,472
2008-09	2003	134	133	101	111	134	107	96	121	115	107	127	103	103	95	36	682	343	428	1,453	1,489
2009-10	2004	165	136	129	102	112	128	101	98	126	110	108	103	102	85	34	708	334	398	1,440	1,474
2010-11	2005	153	131	135	128	98	109	130	103	102	116	113	85	93	100	33	731	321	391	1,443	1,476
2011-12	2006	175	125	125	126	123	98	115	127	105	104	109	96	68	90	42	712	336	363	1,411	1,453
2012-13	2007	166	132	131	121	120	115	102	128	135	104	101	92	100	71	46	721	367	364	1,452	1,498
2013-14	2008	151	123	131	127	120	124	109	108	124	133	97	99	88	102	37	734	365	386	1,485	1,522
2014-15	2009	136	106	123	125	134	108	118	112	105	123	98	98	87	95	35	714	340	378	1,432	1,467
2015-16	2010	117	92	107	118	120	129	113	116	114	103	102	85	84	82	38	679	333	353	1,365	1,403
2016-17	2011	134	98	91	106	115	120	127	98	120	109	103	82	88	85	45	657	327	358	1,342	1,387
2017-18	2012	127	91	99	86	102	111	119	127	104	123	108	101	75	83	41	608	354	367	1,329	1,370
2018-19	2013	153	83	89	92	90	96	117	117	130	103	84	89	101	73	44	567	350	347	1,264	1,308

- Progression of relatively large cohort that entered in 2012-13
  - Current K cohort entered at almost 50 fewer students
- Unusual K and 9<sup>th</sup> grade cohorts this year
  - Births would have predicted larger K class
  - Significant loss of 8<sup>th</sup> grade cohort from last year
- Other public school enrollment data not available



# Projections

# Projections Method: Primer

- The Cohort Survival Methodology Relies on Observed Data from the Recent Past in Order to Project the Near Future
- Persistency Ratios Calculated From Historic Enrollment Data to Determine Growth or Loss in a Class as It Progresses Through School System
- Persistency Ratios Account for the Various External Factors Affecting Enrollments: Housing Characteristics, Residential Development, Economic Conditions, Student Transfers In and Out of System, and Student Mobility
- Changes in Population, Housing Stock and Tenure, and Economic Conditions Help Explain Persistency Ratios
- Greatest confidence in first five years of projections because based on known data – births and current enrollments

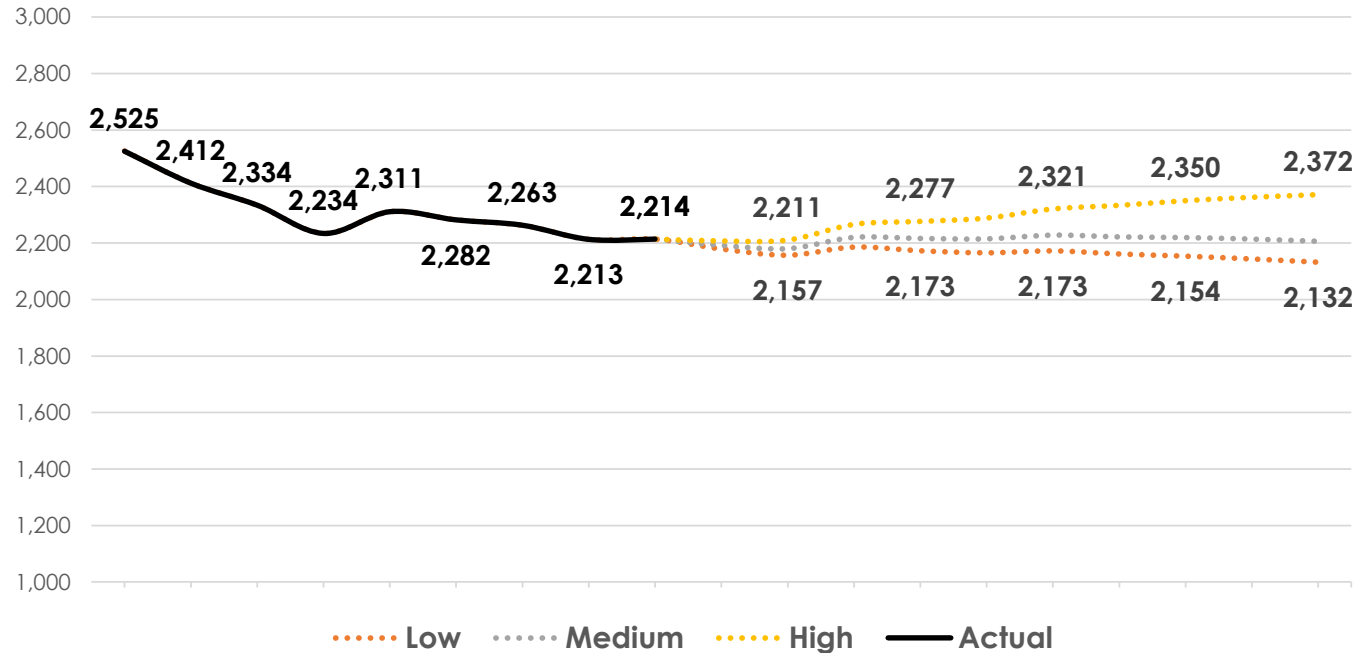
# Projections: APS Persistency Ratios

Year	Birth-K	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	Est. of Migration
2008-09	0.7943	1.0175	0.8675	0.9270	0.9686	0.9684	0.9677	1.0495	1.0394	1.1043	0.7322	0.8261	0.9023	-6.9%
2009-10	0.7804	1.1116	0.8541	1.0493	1.0093	0.9630	1.0054	1.0222	1.0314	1.1659	0.8841	0.9429	1.0526	-3.5%
2010-11	0.8608	1.0704	0.8072	0.9698	1.0094	0.9312	0.9615	0.9730	1.0000	1.0457	0.8415	0.8398	0.8848	-7.6%
2011-12	0.6932	1.0392	0.9108	0.9403	0.9741	0.9488	0.9212	0.9350	1.0111	1.0217	0.7621	0.8406	1.0173	-5.7%
2012-13	0.7154	1.1437	0.8538	0.9948	0.9947	0.9894	0.9853	0.9893	1.0107	0.9451	0.8404	0.8408	1.0000	-4.5%
2013-14	0.7237	1.0966	0.8492	0.9779	0.8705	0.9468	0.9892	1.0199	1.0162	0.9735	0.8547	0.8797	1.0379	-9.1%
2014-15	0.8795	1.1636	0.9119	1.0059	1.0339	1.0833	1.0112	1.0272	1.0293	0.9043	1.0163	0.8980	1.0216	0.6%
2015-16	0.8142	0.9695	0.9010	0.9773	0.9941	1.0055	0.9890	0.9556	1.0106	0.9100	0.9941	0.8556	0.9318	-3.2%
2016-17	0.9574	0.8981	0.9215	0.9653	1.0349	1.0000	0.9620	1.0278	1.0174	0.8953	1.0104	0.8698	0.9938	-2.1%
2017-18	0.8045	0.9833	0.9459	1.0227	1.0719	1.0281	1.0000	1.0056	1.0162	0.7543	0.9825	0.8660	0.9456	1.6%
2018-19	0.8706	1.1073	0.9831	0.9771	1.0000	0.9888	1.0546	0.9822	0.9719	0.8777	0.9242	0.9345	0.9821	-1.3%
Long Term Avg	0.8481	1.0417	0.9044	0.9967	1.0017	0.9770	0.9883	0.9939	1.0112	0.9731	0.8832	0.8931	0.9522	
5-Yr Avg	0.8653	1.0244	0.9327	0.9897	1.0270	1.0211	1.0034	0.9997	1.0091	0.8683	0.9855	0.8848	0.9750	
3-Yr Avg	0.8775	0.9962	0.9502	0.9884	1.0356	1.0056	1.0055	1.0052	1.0019	0.8424	0.9724	0.8901	0.9738	
3-Yr Wgt Avg	0.8631	1.0311	0.9604	0.9904	1.0298	1.0038	1.0210	0.9976	0.9943	0.8395	0.9580	0.9009	0.9719	
2-Yr Avg	0.8376	1.0453	0.9645	0.9999	1.0359	1.0085	1.0273	0.9939	0.9941	0.8160	0.9533	0.9003	0.9639	

- Persistency > 1 means students moved into the cohort through transfers in, or retention
- Inconsistency in ratios in elementary grades indicator of transiency
- Inconsistent migration estimates (comparing 2<sup>nd</sup> – 5<sup>th</sup> grade cohort to previous 1<sup>st</sup> -4<sup>th</sup> grade cohort) also indicate transiency
- Projections prepared in 2018 were 3% low for 2018-19, especially affected by unusual 1<sup>st</sup> and 6<sup>th</sup> grade class sizes – revised projections upwards

# Projections: APS Models

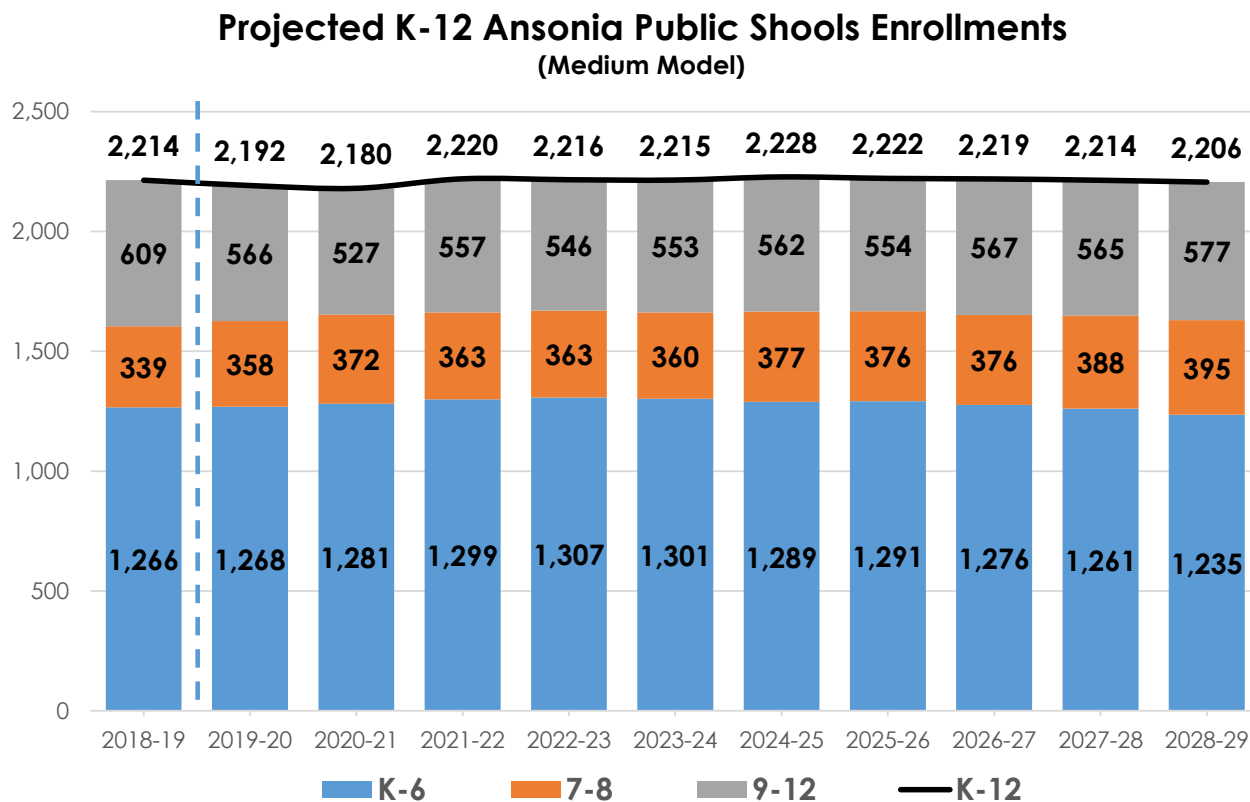
**Ansonia Actual and Projected Enrollments**



- Low, medium and high projections prepared using different assumptions
- Medium projection model is best fit; however, all three models provide a range to benchmark against for long-range facilities planning purposes

# Projections: APS Medium Model

- Elementary projected to increase 3% over the next five years, before decreasing to below current levels nine to ten years out
- Middle school projected to increase 7% over five years, and 17% out ten years
- High school is projected to decrease about 10% out five years and about 6% overall out ten years





# Projections: APS Details

School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	K-6	7-8	9-12	K-12	PK-12
2018-19	2013	201	175	196	174	171	180	177	193	166	173	165	122	157	165	100	1,266	339	609	2,214	2,314
2019-20	2014	220	190	180	188	172	176	181	181	193	165	145	158	110	153	100	1,268	358	566	2,192	2,292
2020-21	2015	217	187	196	173	186	177	177	184	180	191	139	139	142	107	100	1,281	372	527	2,180	2,280
2021-22	2016	227	196	193	188	172	192	178	180	184	179	161	133	125	138	100	1,299	363	557	2,220	2,320
2022-23	2017	211	182	202	185	186	177	193	182	180	183	150	154	120	122	100	1,307	363	546	2,216	2,316
2023-24	2018	197	170	188	194	184	192	177	197	181	179	154	144	139	116	100	1,301	360	553	2,215	2,315
2024-25	2019	207	178	175	180	192	189	192	181	196	180	150	147	130	135	100	1,289	377	562	2,228	2,328
2025-26	2020	204	176	184	168	179	198	190	197	181	195	151	144	133	126	100	1,291	376	554	2,222	2,322
2026-27	2021	202	174	182	177	167	184	199	194	196	180	164	145	130	129	100	1,276	376	567	2,219	2,319
2027-28	2022	200	172	180	175	175	172	185	203	193	195	151	157	131	126	100	1,261	388	565	2,214	2,314
2028-29	2023	198	170	178	173	173	180	172	188	202	192	164	144	141	127	100	1,235	395	577	2,206	2,306

School	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Mead	566	597	583	565	600	619	636	659	680	696	710	702	700	691	683	669
Prendergast	661	680	688	665	638	644	632	623	620	611	592	587	591	584	578	566
TOTAL	1,227	1,277	1,271	1,230	1,238	1,263	1,268	1,281	1,299	1,307	1,301	1,289	1,291	1,276	1,261	1,235

- Due to ad hoc placement of students in the elementary schools, difficult to accurately project enrollments at individual schools

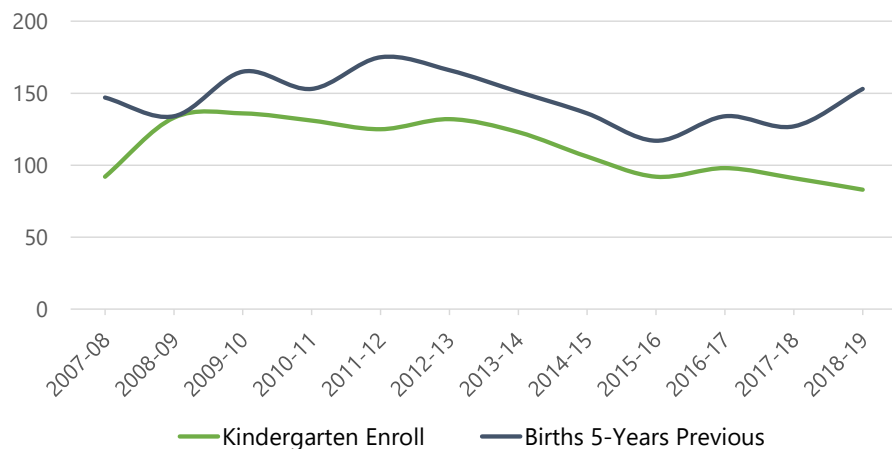
# Projections: DPS Persistency Ratios

Year	Birth-K	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	Est. of Migration
2008-09	0.9925	1.0978	0.9174	1.0075	1.0918	1.0909	1.0342	1.0177	0.9817	0.9549	0.9035	0.9537	0.8796	1.8%
2009-10	0.8242	0.9699	1.0099	1.0090	0.9552	0.9439	1.0208	1.0413	0.9565	1.0093	0.8110	0.9903	0.8252	-2.2%
2010-11	0.8562	0.9926	0.9922	0.9608	0.9732	1.0156	1.0198	1.0408	0.9206	1.0273	0.7870	0.9029	0.9804	-1.3%
2011-12	0.7143	0.9542	0.9333	0.9609	1.0000	1.0550	0.9769	1.0194	1.0196	0.9397	0.8496	0.8000	0.9677	-1.7%
2012-13	0.7952	1.0480	0.9680	0.9524	0.9350	1.0408	1.1130	1.0630	0.9905	0.9712	0.8440	1.0417	1.0441	-3.0%
2013-14	0.8146	0.9924	0.9695	0.9917	1.0333	0.9478	1.0588	0.9688	0.9852	0.9327	0.9802	0.9565	1.0200	-1.4%
2014-15	0.7794	1.0000	0.9542	1.0551	0.9000	0.9516	1.0275	0.9722	0.9919	0.7368	1.0103	0.8788	1.0795	-3.4%
2015-16	0.7863	1.0094	0.9593	0.9600	0.9627	1.0463	0.9831	1.0179	0.9810	0.8293	0.8673	0.8571	0.9425	-2.0%
2016-17	0.7313	0.9891	0.9907	0.9746	1.0000	0.9845	0.8673	1.0345	0.9561	1.0000	0.8039	1.0353	1.0119	-1.3%
2017-18	0.7165	1.0102	0.9451	0.9623	0.9652	0.9917	1.0000	1.0612	1.0250	0.9908	0.9806	0.9146	0.9432	-3.2%
2018-19	0.5425	0.9780	0.9293	1.0465	0.9412	1.0541	0.9832	1.0236	0.9904	0.6829	0.8241	1.0000	0.9733	-0.8%
Long Term Avg	0.7776	1.0038	0.9608	0.9892	0.9780	1.0111	1.0077	1.0237	0.9817	0.9159	0.8783	0.9392	0.9698	
5-Yr Avg	0.7112	0.9974	0.9557	0.9997	0.9538	1.0056	0.9722	1.0219	0.9889	0.8480	0.8972	0.9372	0.9901	
3-Yr Avg	0.6635	0.9925	0.9550	0.9945	0.9688	1.0101	0.9501	1.0398	0.9905	0.8913	0.8695	0.9833	0.9761	
4-Yr Avg	0.6942	0.9967	0.9561	0.9858	0.9673	1.0191	0.9584	1.0343	0.9881	0.8758	0.8690	0.9518	0.9677	
6-Yr Avg	0.7284	0.9965	0.9580	0.9984	0.9671	0.9960	0.9866	1.0130	0.9883	0.8621	0.9111	0.9404	0.9951	

- High variability in Birth-K and 8-9 ratios; however unusually low this year
- Inconsistency in ratios in elementary grades indicator of transiency
- Inconsistent migration estimates (comparing 2<sup>nd</sup> – 5<sup>th</sup> grade cohort to previous 1<sup>st</sup> -4<sup>th</sup> grade cohort) also indicate transiency

# NVCOG Projections: DPS B-K Ratio

**Derby Kindergarten Enrollment and Births 5-Years Previous**



**Examples of Birth-K Ratios from Other Communities**

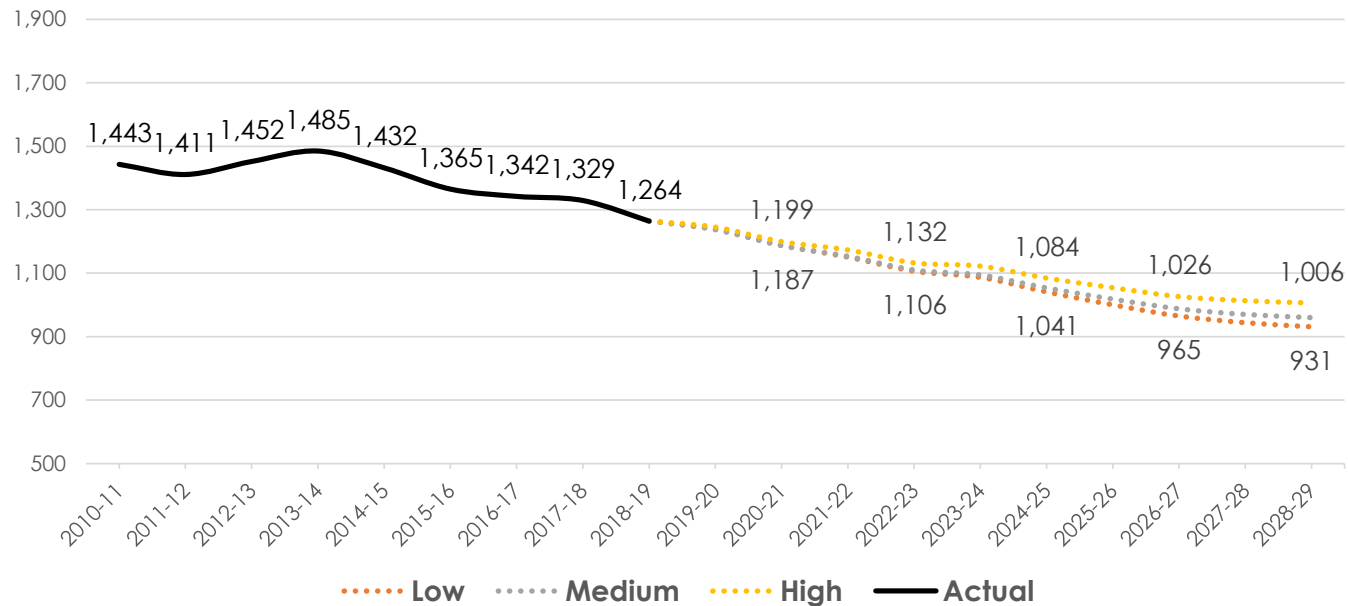
Year	Derby	Hamden	Meriden	Norwalk	Shelton
2008-09	0.9925	0.6557	0.7969	0.6920	0.9594
2009-10	0.8242	0.6977	0.8123	0.7200	0.7896
2010-11	0.8562	0.7211	0.8024	0.7020	0.9083
2011-12	0.7143	0.6611	0.7500	0.7290	0.8296
2012-13	0.7952	0.6519	0.8479	0.7410	0.9266
2013-14	0.8146	0.6513	0.7981	0.7120	0.7849
2014-15	0.7794	0.6525	0.8329	0.7110	0.9022
2015-16	0.7863	0.6192	0.8053	0.7510	1.0031
2016-17	0.7313	0.5915	0.8261	0.6890	1.0417
2017-18	0.7165	0.6201	0.7751	0.7110	0.9967
2018-19	<b>0.5425</b>	0.6261	0.8204	0.7320	1.0233

- While large gaps between births and K enrollment have occurred in the past, there has been a general consistency this decade, until this year
- Moreover, this year's ratio is exceptionally low, even relative to other districts with significant rental housing stock
  - Only Hamden has had one year with Birth-K below 0.6, and Hamden sends significant enrollment to ACES WIMS and New Haven magnet schools
- Without live birth data, and other public/ private school enrollment data, difficult to explain
- Impacts projections



# Projections: DPS Models

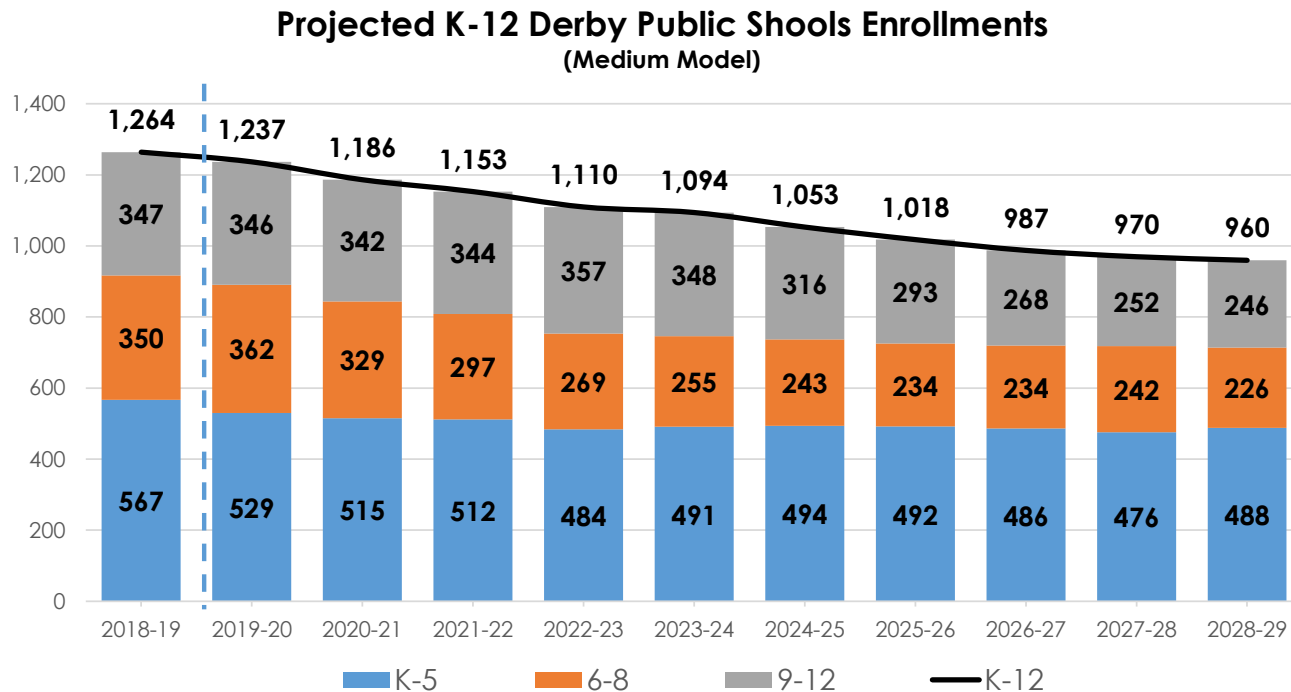
Derby Actual and Projected Enrollments



- All models project continued decrease at varying rates
- Greatest confidence in first five years of projections, as they are based on known data

# Projections: DPS Medium Model

- Elementary projected to decrease 13% over the next five years, and by 14% out ten years
- Middle school projected to decrease 28% over five years, with additional decreases out ten years due to smaller cohorts
- High school is projected to have steady enrollment over the next five years, before declining due to smaller cohorts





# Projections: DPS Medium Details

School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	K-5	6-8	9-12	K-12	PK-12
2018-19	2013	153	83	89	92	90	96	117	117	130	103	84	89	101	73	44	567	350	347	1,264	1,308
2019-20	2014	124	86	83	85	91	87	98	112	121	128	90	73	85	98	42	529	362	346	1,237	1,279
2020-21	2015	129	90	86	79	84	88	89	94	116	120	112	78	69	82	42	515	329	342	1,186	1,228
2021-22	2016	133	92	89	82	78	81	89	85	97	115	105	98	75	67	42	512	297	344	1,153	1,195
2022-23	2017	97	67	92	85	81	75	83	86	88	96	100	91	93	72	42	484	269	357	1,110	1,152
2023-24	2018	140	97	67	88	84	78	77	79	89	87	84	87	87	90	42	491	255	348	1,094	1,136
2024-25	2019	123	85	97	64	87	81	80	74	82	88	76	73	83	84	42	494	243	316	1,053	1,095
2025-26	2020	121	84	85	93	63	84	83	76	76	81	77	66	69	80	42	492	234	293	1,018	1,060
2026-27	2021	120	83	84	81	91	61	85	79	79	75	71	67	63	67	42	486	234	268	987	1,029
2027-28	2022	118	82	83	80	80	88	62	82	82	78	66	62	63	61	42	476	242	252	970	1,012
2028-29	2023	117	81	82	79	79	77	90	60	85	81	68	57	59	61	42	488	226	246	960	1,002

School	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28	2028-29
Bradley	376	365	347	326	279	252	226	223	219	202	209	211	210	208	204	208
Irving	378	349	328	329	328	313	304	292	294	282	283	283	282	278	272	280
TOTAL	754	714	675	655	607	565	529	515	512	484	491	494	492	486	476	488

- Bradley projected to decrease at a steeper rate than Irving

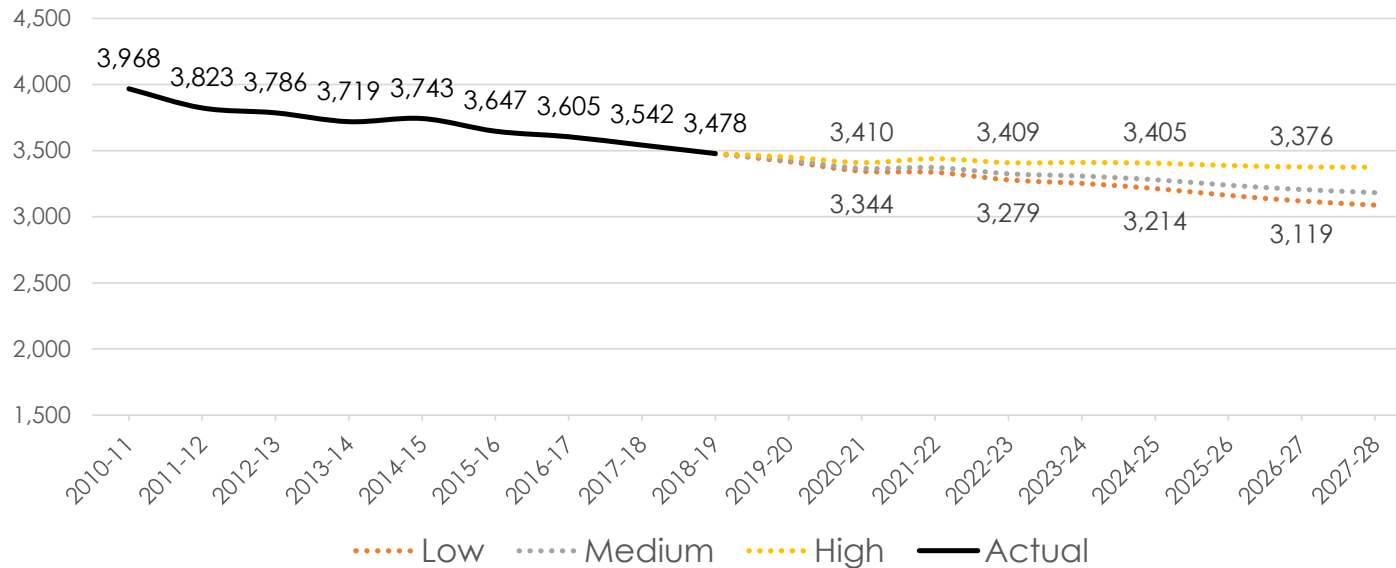
# Projections: Comb. Persistency Ratios

Year	Birth-K	K-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	Est. of Migration
2008-09	0.8582	1.0405	0.8845	0.9563	1.0062	1.0072	0.9934	1.0373	1.0192	1.0465	0.7875	0.8733	0.8936	-4.0%
2009-10	0.7976	1.0588	0.9012	1.0350	0.9886	0.9567	1.0107	1.0299	1.0033	1.1132	0.8583	0.9604	0.9608	-3.0%
2010-11	0.8590	1.0388	0.8704	0.9668	0.9969	0.9624	0.9806	0.9965	0.9677	1.0391	0.8249	0.8608	0.9213	-5.4%
2011-12	0.7019	1.0060	0.9195	0.9483	0.9828	0.9846	0.9429	0.9637	1.0142	0.9900	0.7931	0.8288	1.0000	-4.3%
2012-13	0.7476	1.1037	0.8961	0.9781	0.9712	1.0070	1.0313	1.0191	1.0034	0.9545	0.8418	0.9170	1.0124	-3.9%
2013-14	0.7599	1.0519	0.8970	0.9834	0.9329	0.9472	1.0139	1.0000	1.0031	0.9590	0.9011	0.9080	1.0302	-6.1%
2014-15	0.8417	1.0938	0.9290	1.0270	0.9798	1.0274	1.0174	1.0068	1.0152	0.8349	1.0142	0.8902	1.0441	-1.1%
2015-16	0.8054	0.9835	0.9238	0.9701	0.9803	1.0206	0.9867	0.9795	1.0000	0.8802	0.9478	0.8561	0.9361	-2.7%
2016-17	0.8634	0.9262	0.9463	0.9691	1.0205	0.9933	0.9259	1.0304	0.9930	0.9320	0.9388	0.9252	1.0000	-1.8%
2017-18	0.7723	0.9928	0.9457	1.0000	1.0284	1.0134	1.0000	1.0255	1.0197	0.8451	0.9818	0.8804	0.9447	-0.3%
2018-19	0.7288	1.0634	0.9638	1.0000	0.9787	1.0138	1.0265	1.0000	0.9787	0.8006	0.8792	0.9591	0.9794	-1.1%
Long Term Avg	0.7942	1.0327	0.9161	0.9849	0.9878	0.9940	0.9936	1.0081	1.0016	0.9450	0.8880	0.8963	0.9748	
5-Yr Avg	0.8023	1.0119	0.9417	0.9932	0.9975	1.0137	0.9913	1.0084	1.0013	0.8586	0.9523	0.9022	0.9808	
3-Yr Avg	0.7882	0.9941	0.9519	0.9897	1.0092	1.0068	0.9841	1.0186	0.9971	0.8592	0.9332	0.9216	0.9747	
4-Yr	0.7925	0.9915	0.9449	0.9848	1.0020	1.0103	0.9848	1.0088	0.9979	0.8645	0.9369	0.9052	0.9650	
6-Yr Avg	0.7952	1.0186	0.9343	0.9916	0.9868	1.0026	0.9951	1.0070	1.0016	0.8753	0.9438	0.9032	0.9891	

- Combining historic enrollments from both districts, calculated new persistency ratios
- Larger cohorts less subject to large swings in ratios from year to year
- Opportunity to retain more students from middle to high school levels?

# Projections: Aggregated Projections

**Aggregated Ansonia-Derby  
Actual and Projected Enrollments**



- High projections maintain joint K-12 enrollment around 3,400 students
- Medium and low models project more of a decrease



# Projections: Comb. Med. Projections

School Year	Birth Year	Births	K	1	2	3	4	5	6	7	8	9	10	11	12	PK	K-5	6-8	9-12	K-12	PK-12
2018-19	2013	354	258	285	266	261	276	294	310	296	276	249	211	258	238	144	1,640	882	956	3,478	3,622
2019-20	2014	344	276	263	273	263	263	279	293	314	294	235	231	195	250	142	1,617	900	911	3,428	3,570
2020-21	2015	346	277	282	252	270	265	265	278	296	311	251	218	212	189	142	1,612	886	869	3,367	3,509
2021-22	2016	360	288	282	270	250	273	268	265	281	294	265	230	200	206	142	1,631	840	901	3,373	3,515
2022-23	2017	308	249	294	271	267	252	275	268	268	279	251	245	213	194	142	1,609	814	902	3,326	3,468
2023-24	2018	337	267	255	282	268	270	254	276	270	266	238	231	225	206	142	1,596	812	900	3,309	3,451
2024-25	2019	329	263	272	245	279	271	272	255	278	268	226	220	213	219	142	1,602	801	878	3,281	3,423
2025-26	2020	325	260	269	261	242	282	273	273	257	276	228	210	202	207	142	1,587	806	847	3,239	3,381
2026-27	2021	322	257	266	258	258	245	284	273	275	255	235	212	193	196	142	1,568	803	835	3,207	3,349
2027-28	2022	318	254	263	255	255	260	247	285	276	273	217	219	194	187	142	1,534	833	816	3,183	3,325
2028-29	2023	314	251	259	252	252	257	262	248	287	274	232	202	200	188	142	1,535	809	822	3,166	3,308

- K-5 projected to decrease 3% over next five years and about 6% over the next ten years
- 6-8 projected to decrease 8% over next five years and remain stable at about 800 students out ten years
- 9-12 projected to decrease 6% over next five years; however, experience more significant decline in the latter half of projection horizon for a total decrease of 14% out ten years



# Context: Combined Enrolls

- Combined Ansonia-Derby K-12 enroll is large relative to existing CT regional K-12 districts
- However, the 7-12 and 9-12 numbers are in line with other such regional districts

District	Participating Towns	Regional Grade Structure	2018-19 Enroll
<b>Regional School District 04</b>	Chester, Deep River, Essex	7-12	882
<b>Regional School District 05</b>	Bethany, Orange, Woodbridge	7-12	2,162
<b>Regional School District 06</b>	Warren, Morris, Goshen	K-12	910
<b>Regional School District 07</b>	Barkhamsted, Colebrook, New Hartford, Norfolk	7-12	1,063
<b>Regional School District 08</b>	Andover, Hebron, Marlborough	7-12	1,435
<b>Regional School District 09</b>	Easton, Redding	9-12	875
<b>Regional School District 10</b>	Burlington, Harwinton	K-12	2,260
<b>Regional School District 11</b>	Chaplin, Hampton, Scotland	7-12	225
<b>Regional School District 12</b>	Bridgewater, Roxbury, Washington	K-12	681
<b>Regional School District 13</b>	Durham, Middlefield	K-12	1,611
<b>Regional School District 14</b>	Bethlehem, Woodbury	K-12	1,645
<b>Regional School District 15</b>	Middlebury, Southbury	K-12	3,602
<b>Regional School District 16</b>	Beacon Falls, Prospect	K-12	2,124
<b>Regional School District 17</b>	Haddam, Killingworth	K-12	2,013
<b>Regional School District 18</b>	Lyme, Old Lyme	K-12	1,254
<b>Regional School District 19</b>	Ashford, Mansfield, Willington	9-12	1,146

# Questions?