FutureThink

Formerly DeJONG-HEALY

OAKWOOD CITY SCHOOL DISTRICT

Montgomery County K-12 School Districts

Enrollment Projections Report

December 2017

Montgomery County ESC

INTRODUCTION

Based on a request from the Montgomery County ESC, **FutureThink** was contracted to develop enrollment projections for the 16 school districts in the County. This report contains the enrollment projections for Oakwood City School District.

This report contains ten-year enrollment projections, which were developed by analyzing the following data:

- Live birth data
- Historical enrollment
- Community school enrollment
- Open enrollment
- Community demographics
- Housing information

The projections presented in this report are meant to serve as a planning tool for the future and represent the most likely direction of the District.

HISTORICAL ENROLLMENT

Over the past ten years, student enrollment in the Oakwood City School District has decreased by 81 students in grades K – 12, including ungraded students. Total enrollment for the 2016-17 school year is 2,053 students.

Oakwood City School District
Historical Enrollment

Grade	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
K	139	137	121	119	117	121	129	119	115	147
1	159	158	138	146	130	131	131	136	120	126
2	174	165	163	145	150	139	129	134	139	117
3	157	181	163	165	144	152	143	139	141	142
4	167	162	184	173	169	151	144	146	147	141
5	178	179	167	187	178	159	153	150	152	149
6	168	184	175	159	185	186	164	160	158	161
7	170	166	186	182	157	182	187	180	161	161
8	171	180	165	185	178	163	189	189	185	166
9	177	167	176	168	176	180	165	198	183	187
10	157	179	168	176	164	178	178	169	191	191
11	169	154	176	162	163	164	169	181	172	193
12	148	174	152	182	165	163	167	174	177	169
K - 12 Total	2,134	2,186	2,134	2,149	2,076	2,069	2,048	2,075	2,041	2,050
Ungraded	0	0	1	0	1	2	2	3	2	3
Grand Total	2,134	2,186	2,135	2,149	2,077	2,071	2,050	2,078	2,043	2,053

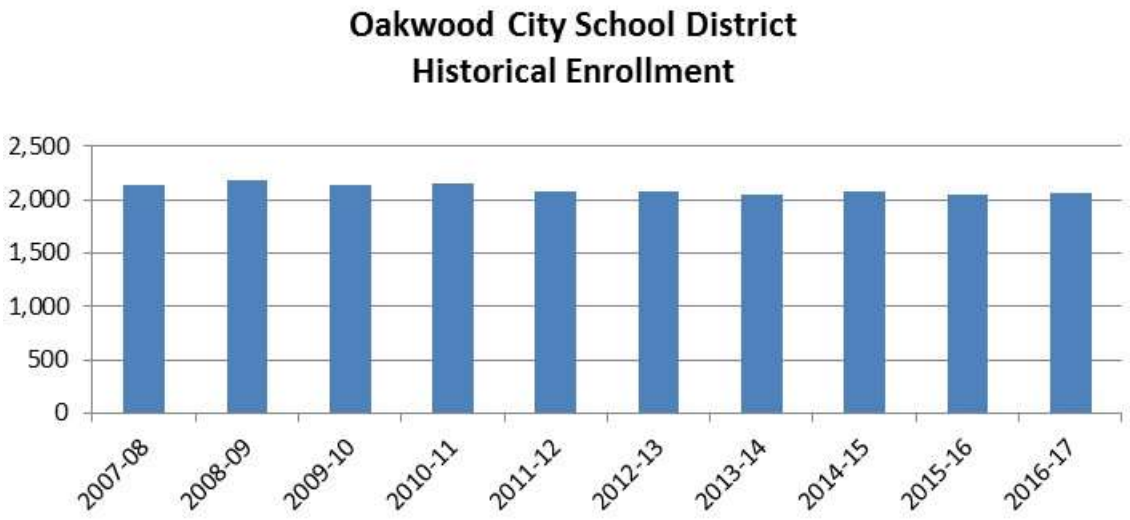
Source: Ohio Department of Education, EMIS; Oakwood City School District

Oakwood City School District
Historical Enrollment by Grade Group

Grade	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
K - 5	974	982	936	935	888	853	829	824	814	822
6 - 8	509	530	526	526	520	531	540	529	504	488
9 - 12	651	674	672	688	668	685	679	722	723	740
K - 12 Total	2,134	2,186	2,134	2,149	2,076	2,069	2,048	2,075	2,041	2,050
Ungraded	0	0	1	0	1	2	2	3	2	3
Grand Total	2,134	2,186	2,135	2,149	2,077	2,071	2,050	2,078	2,043	2,053

Source: Ohio Department of Education, EMIS; Oakwood City School District

The following graph illustrates the District's K – 12 enrollment history from 2007-08 through 2016-17.



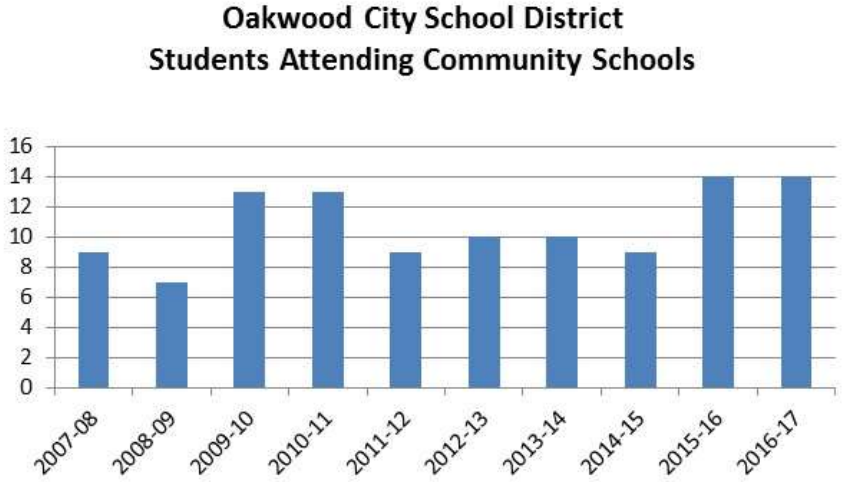
COMMUNITY SCHOOL ENROLLMENT

Since 2008-09, the number of Oakwood City School District students attending community schools has increased from 9 to 14 students with some fluctuation. Enrollment of Oakwood City School District students attending community schools should be closely monitored as it may have a significant impact on District enrollment in the future.

Oakwood City School District
Community School Enrollment

Grade	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Pre-K	0	0	0	0	0	0	0	0	0	0
K	1	0	1	0	0	1	1	0	2	0
1	0	0	0	0	0	0	1	1	0	1
2	0	0	0	0	0	0	0	0	1	0
3	0	0	0	0	0	0	2	0	0	0
4	0	0	0	0	1	1	0	1	0	0
5	0	0	0	0	0	0	1	0	2	1
6	0	0	0	1	0	0	0	1	0	2
7	2	1	0	0	2	1	1	0	1	0
8	0	2	2	1	0	1	0	1	0	2
9	1	0	4	2	1	0	1	0	2	3
10	2	0	2	5	2	2	2	1	2	2
11	1	1	2	1	2	1	1	3	2	0
12	0	1	0	1	1	3	0	1	2	3
Ungraded	2	2	2	2	0	0	0	0	0	0
Grand Total	9	7	13	13	9	10	10	9	14	14

Source: Ohio Department of Education, EMIS; Oakwood City School District



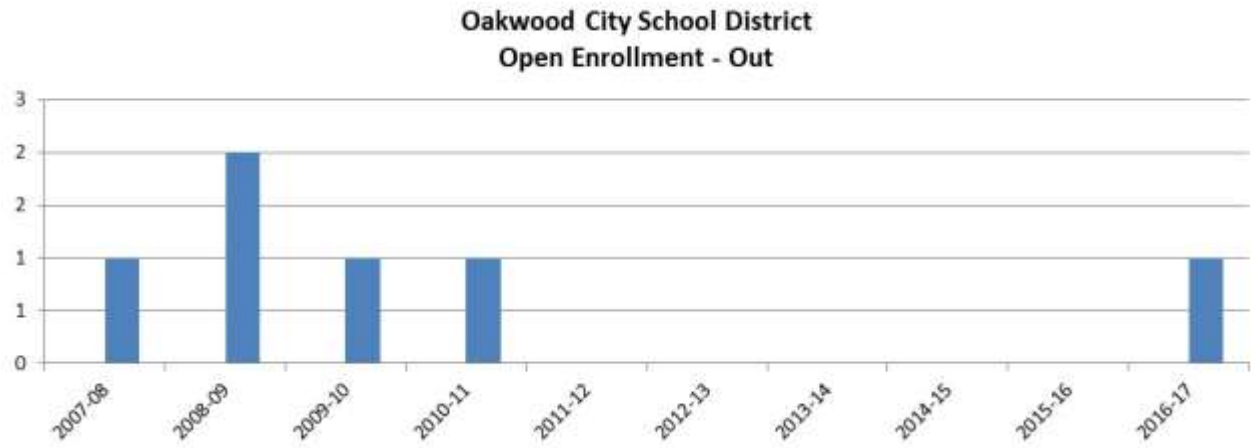
OPEN ENROLLMENT

Since 2008-09, the number of Oakwood City School District students "open enrolling" out of the District has fluctuated between 0 and 2 students. There are no students "open enrolling" into the District. Significant changes in the number of students "open enrolling" into or out of the District from year to year can impact enrollment projections and should be monitored.

Oakwood City School District
Open Enrollment - OUT

Grade	2007-08	2008-09	2009-10	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17
Pre-K	0	0	0	0	0	0	0	0	0	0
K	0	0	0	0	0	0	0	0	0	0
1	0	0	0	0	0	0	0	0	0	0
2	0	0	0	0	0	0	0	0	0	0
3	0	0	0	0	0	0	0	0	0	0
4	0	0	0	0	0	0	0	0	0	0
5	0	0	0	0	0	0	0	0	0	0
6	0	0	0	0	0	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	0	0	0	0	1
9	1	0	0	0	0	0	0	0	0	0
10	0	1	0	0	0	0	0	0	0	0
11	0	1	1	0	0	0	0	0	0	0
12	0	0	0	1	0	0	0	0	0	0
Ungraded	0	0	0	0	0	0	0	0	0	0
Grand Total	1	2	1	1	0	0	0	0	0	1

Source: Ohio Department of Education, EMIS; Oakwood City School District



LIVE BIRTH DATA

Utilization of live birth data is recommended when projecting future kindergarten enrollments as it provides a helpful overall trend. The live birth counts are used in determining a birth-to-kindergarten survival ratio. This ratio identifies the percentage of children born in a representative area who attend kindergarten in the District five years later. The survival ratios for birth-to-kindergarten as well as grades 1-12 can be found later in this report.

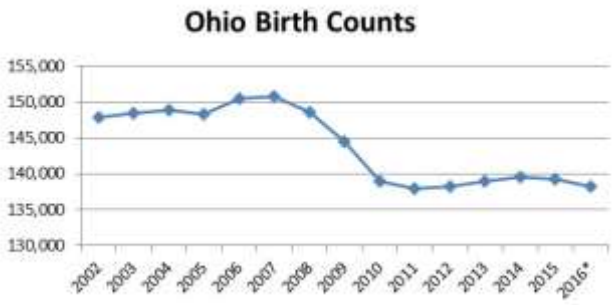
The Ohio Department of Health [ODH] data warehouse provides information about live birth events for Ohio residents. Information about events occurring outside of Ohio to Ohio residents is included. Information about events occurring inside Ohio to non-Ohio residents is not included.

Data is arranged by the residence of the mother. For example, if a mother lives in Powell, Delaware County but delivers her baby in Columbus, Franklin County, the birth is counted in Powell, Delaware County.

The number of live births is recorded by:

- State
- County
- City/Town
- Census Tract
- Zip Code
- Address [not available to the public]

Live birth counts are different from live birth rates. The live birth count is the actual number of live births. A birth rate is the number of births per 1,000 women in a specified population group. Birth rates are provided for counties only and for 9 age groups from 10-14 years to 45+ years.



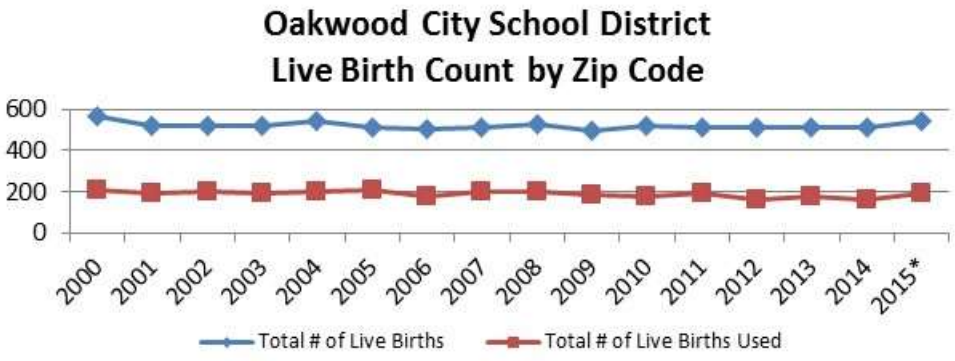
Ohio has experienced a similar trend in live births as seen around the country. Live birth counts increased in 2000. A descending pattern resumed in 2001 with a slight stabilization from 2002 to 2005. Births increased slightly again in 2006 and 2007 but then declined to an all-time low of 138,024 in 2011. In 2012, 2013, and 2014, there were slight increases, but counts for 2015 and 2016 show another decrease.

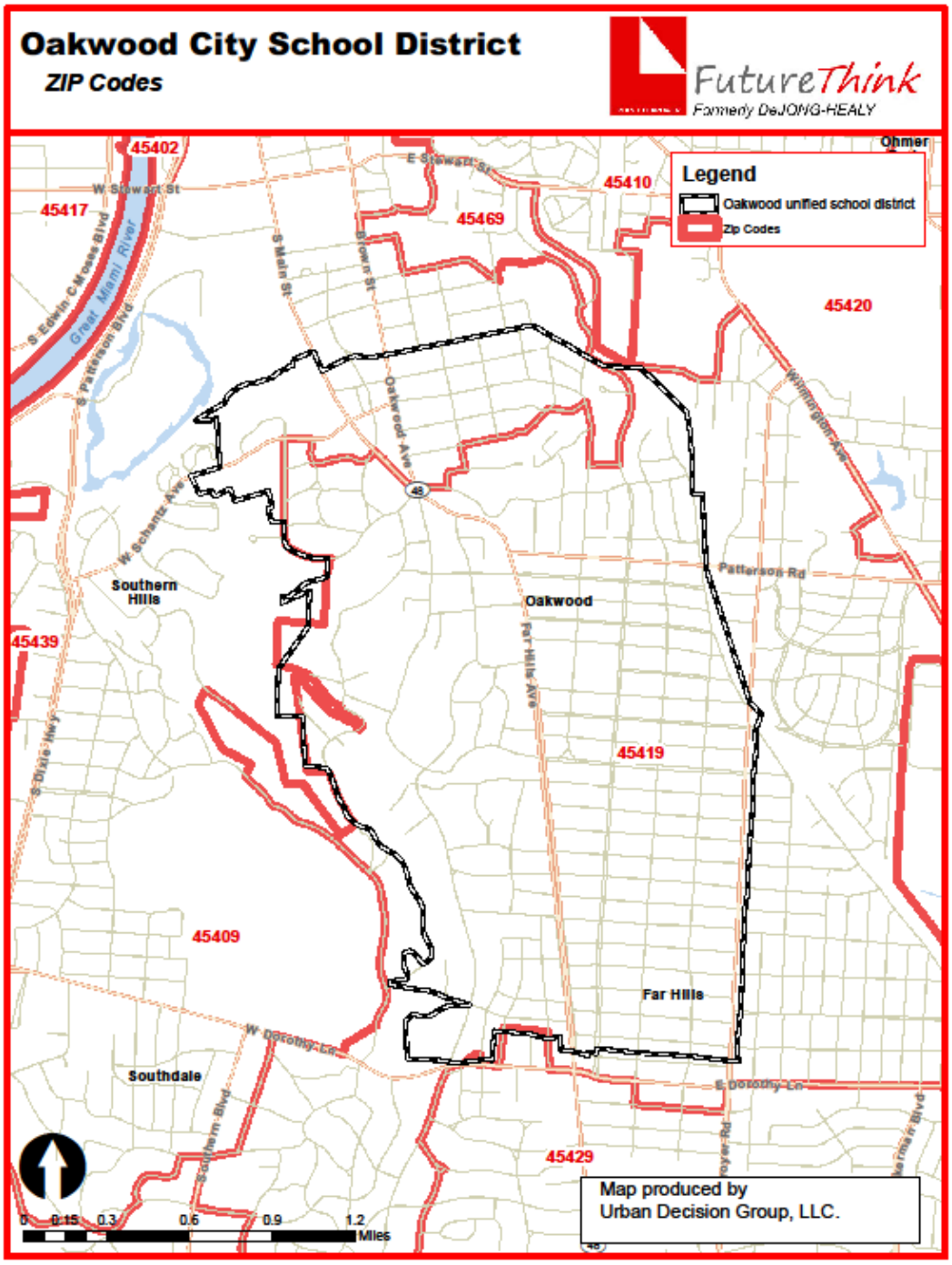
The following table and graph include the live birth counts for zip codes 45409, 45419, and 45429. However, upon analysis of the map on page 8, only zip code 45419 was used for projection purposes.

Oakwood City School District
Live Birth Count by Zip Code
2000-2015

Year	45409	45419	45429	Total # of Live Births	Total # of Live Births Used
2000	87	**205**	273	565	**205**
2001	74	**194**	253	521	**194**
2002	86	**201**	236	523	**201**
2003	77	**193**	250	520	**193**
2004	74	**204**	264	542	**204**
2005	77	**207**	225	509	**207**
2006	80	**175**	252	507	**175**
2007	65	**203**	246	514	**203**
2008	91	**198**	241	530	**198**
2009	74	**183**	240	497	**183**
2010	78	**178**	263	519	**178**
2011	83	**195**	238	516	**195**
2012	88	**162**	259	509	**162**
2013	72	**176**	261	509	**176**
2014	83	**162**	267	512	**162**
2015*	84	**194**	267	545	**194**

Source: Ohio Department of Health, Statistical Analysis Unit
*preliminary




Oakwood City School District
ZIP Codes
FutureThink
Formerly DeJONG-HEALY
Legend
Oakwood unified school district
Zip Codes
45402
45417
45410
45469
45420
45439
45419
45409
45429
Ohmer
Southern Hills
Oakwood
Far Hills
Southdale
W Stewart St
E Stewart St
S Main St
Brown St
Oakwood Ave
Patterson Rd
Far Hills Ave
W Dorothy Ln
E Dorothy Ln
S Dixie Hwy
Southern Blvd
Great Miami River
S Edwin C Moses Blvd
S Patterson Blvd
Wilmington Ave
W Schantz Ave
Map produced by
Urban Decision Group, LLC.
0 0.15 0.3 0.6 0.9 1.2
Miles

DEMOGRAPHICS

Montgomery County is comprised of 22 cities and villages and 10 townships. General demographic data is included in the following tables for the areas.

General Demographic Information

	Montgomery County	State of Ohio
Per Capita Income	$25,734	$26,953
Median Household Income	$43,829	$49,429
Persons Below Poverty	18.6%	15.8%

Source: US Census, American Community Survey, 2015 5-Year Estimates

Total Population

	2000 Census	2010 Census
Montgomery County	559,062	535,153
Brookville City	5,289	5,884
Carlisle City (part)	245	205
Centerville City (part)	23,024	23,997
Clayton City	13,347	13,209
Dayton City	166,179	141,527
Englewood City	12,235	13,465
Farmersville Village	980	1,009
Germantown Village	4,884	5,547
Huber Heights City (part)	38,177	37,142
Kettering City (part)	57,502	55,696
Miamisburg City	19,489	20,181
Moraine City	6,897	6,307
New Lebanon Village	4,231	3,995
Oakwood City	9,215	9,202
Phillipsburg Village	628	557
Riverside City	23,545	25,201
Springboro City (part)	153	1,218
Trotwood City	27,420	24,431
Union City (part)	5,570	6,395
Vandalia City	14,603	15,246
Verona Village (part)	55	79
West Carrollton City	13,818	13,143
Balance of County	111,576	111,517

Source: ODOD Policy Research & Strategic Planning Office, August 2011

Included are block group estimates and projections provided by ESRI. ESRI uses a time series of estimates from the U.S. Census Bureau that includes the latest estimates and inter-censual estimates adjusted for error of closure. The Census Bureau's time series is consistent, but testing has revealed improved accuracy by using a variety of sources to track county population trends.

ESRI also employs a time series of building permits and housing starts plus residential deliveries. Data sources are integrated and then analyzed by Census Block Groups.

Sources of data include:

- Supplementary Surveys of the Census Bureau
- Bureau of Labor Statistics' (BLS) Local Area Unemployment Statistics
- BLS Occupational Employment Statistics
- *Info*USA
- U.S. Bureau of the Census' Current Population Survey
- National Planning Association Data Service

Below is a list of definitions as they appear on the U.S. Census Bureau website, to aid in interpretation of the following tables and maps.

Household:
A household includes all the people who occupy a housing unit as their usual place of residence.

Average family size:
A measure obtained by dividing the number of members of families by the total number of families (or family householders).

Family household (Family):
A family includes a householder and one or more people living in the same household who are related to the householder by birth, marriage, or adoption. All people who are related to the householder are regarded as members of his or her family. A family household may contain people not related to the householder, but those people are not included as part of the householder's family in census tabulations. Thus, the number of family households is equal to the number of families, but family households may include more members than do families. A household can contain only one family for purposes of census tabulations. Not all households contain families since a household may comprise a group of unrelated people or one person living alone.

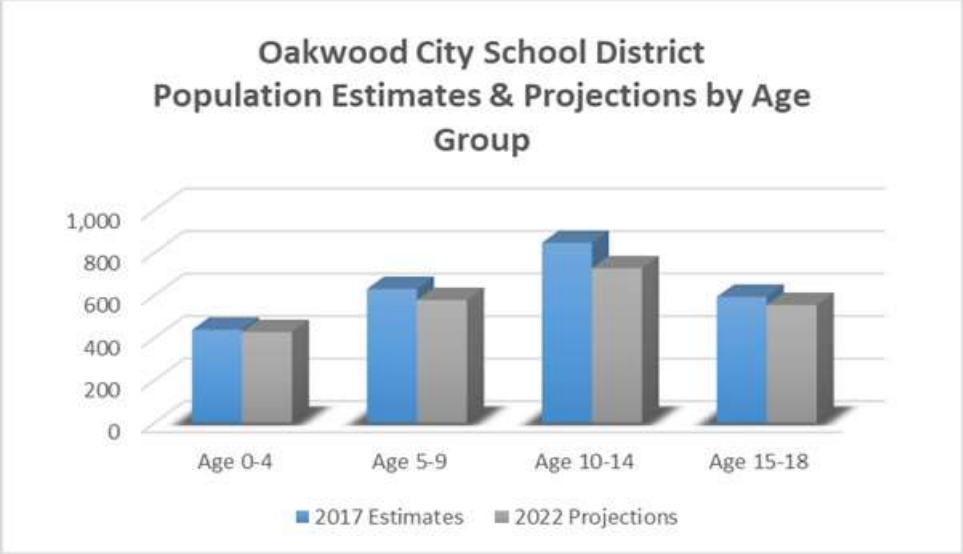
Householder:
The person, or one of the people, in whose name the home is owned, being bought, or rented. If there is no such person present, any household member 15 years old and over can serve as the householder for the purposes of the census. Two types of householders are distinguished: a family householder and a nonfamily householder. A family householder is a householder living with one or more people related to him or her by birth, marriage, or adoption. The householder and all people in the household related to him are family members. A nonfamily householder is a householder living alone or with nonrelatives only.

Montgomery County ESC

The total population in the District is 8,766. This population is projected to decrease by 98 people, or approximately 1%, over a 5-year period. The 0-18 year-old population in the District currently totals 2,508. This population is projected to increase by 221 people, or approximately 9 percent. The median age is projected to increase by approximately 3% from 42.4 to 43.7 years of age.

Oakwood City School District	2017 Estimates	2022 Projections	Change 2017-22	Change 2017-22 (%)
Total Population	8,766	8,668	-98	-1.1%
Age 0-4	438	427	-11	-2.5%
Age 5-9	630	578	-52	-8.3%
Age 10-14	847	727	-120	-14.2%
Age 15-18	593	555	-38	-6.4%
Total Age 0-18	2,508	2,287	-221	-8.8%
Median Age	42.4	43.7	1.3	3.1%

Source: ESRI

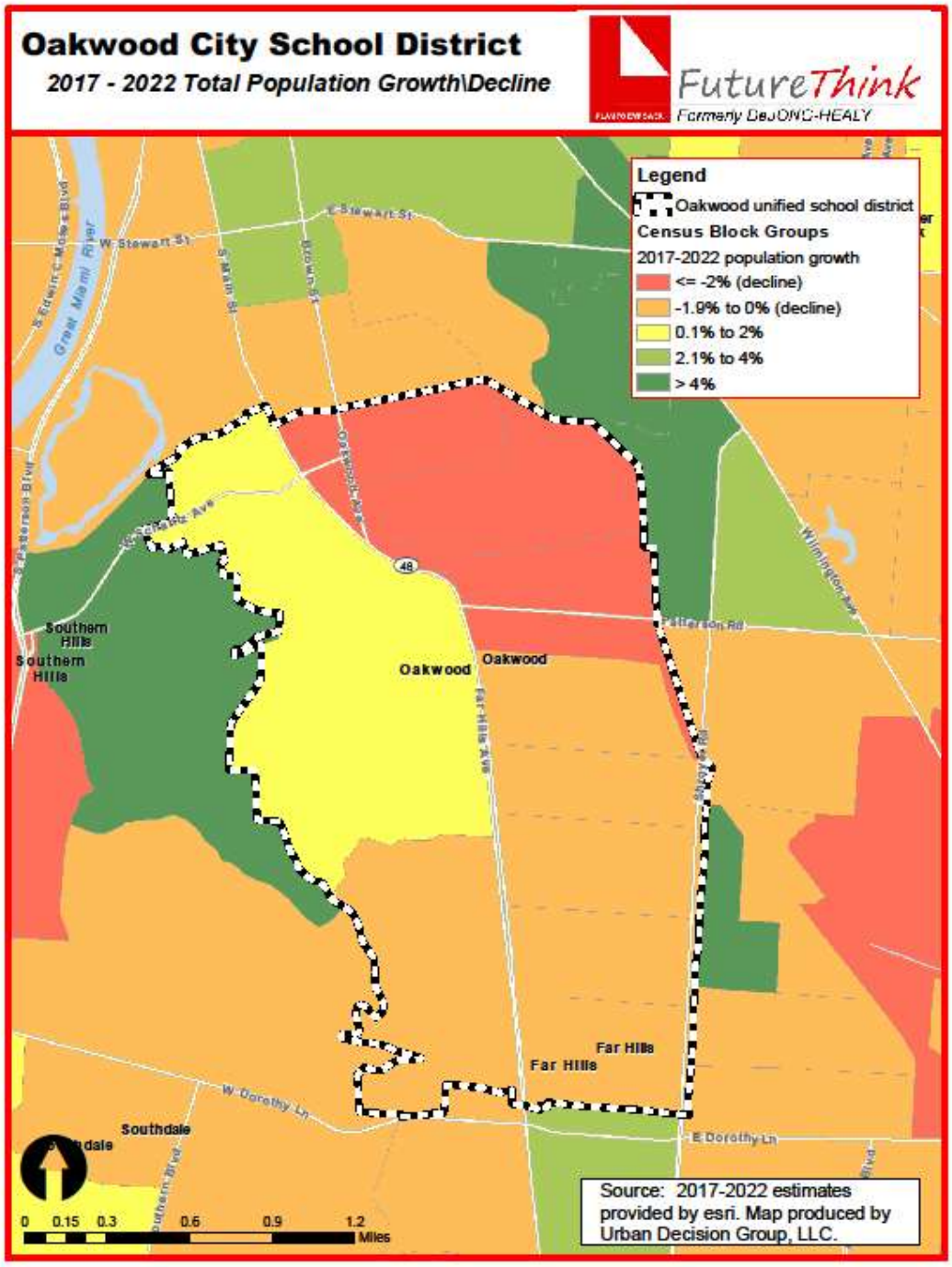


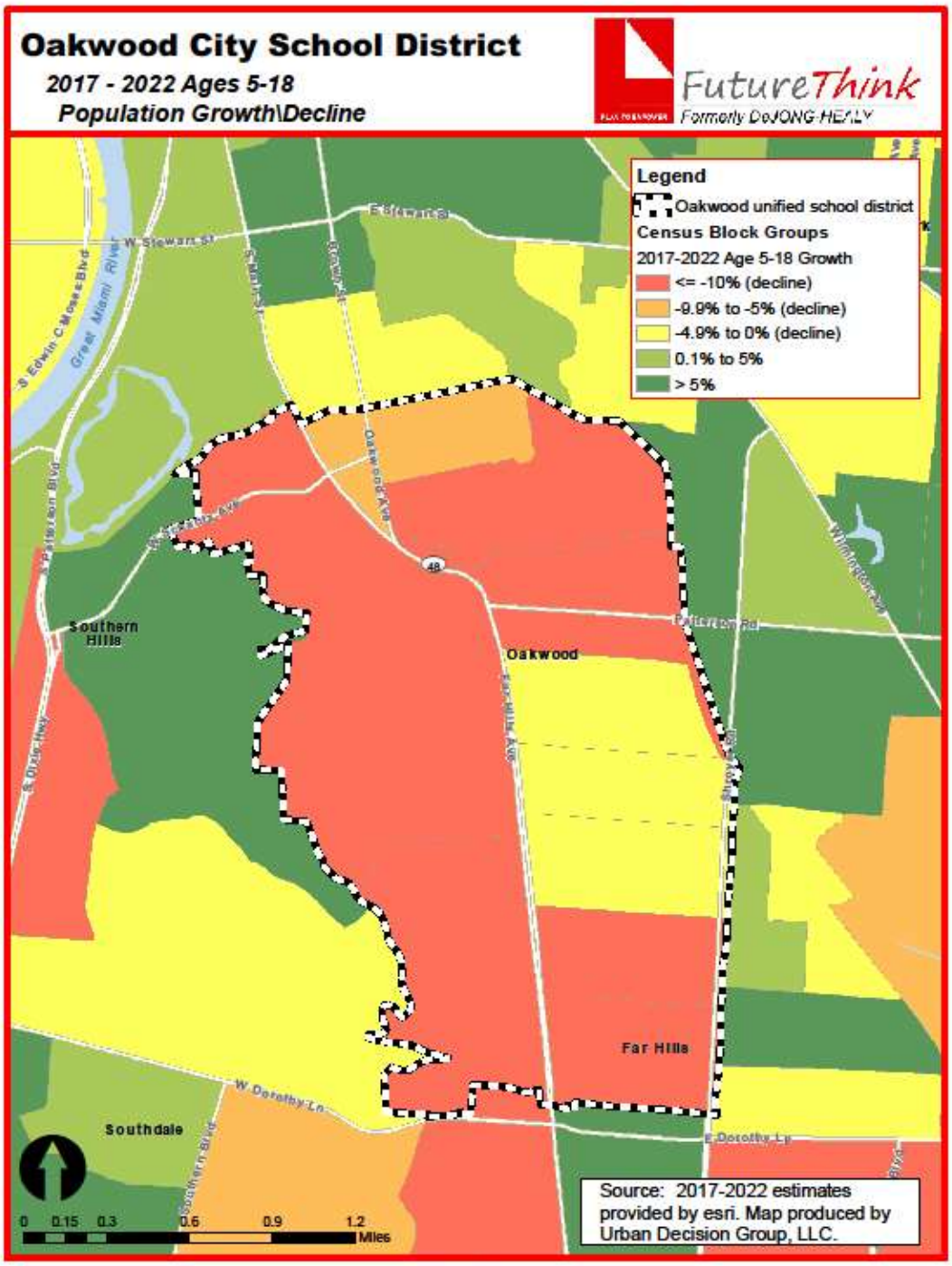
Median and average household incomes in the District are projected to increase by approximately 4% and 10%, respectively over a 5-year period. The average family size is projected to increase slightly, and the number of family households is projected to decrease by approximately 2 percent.

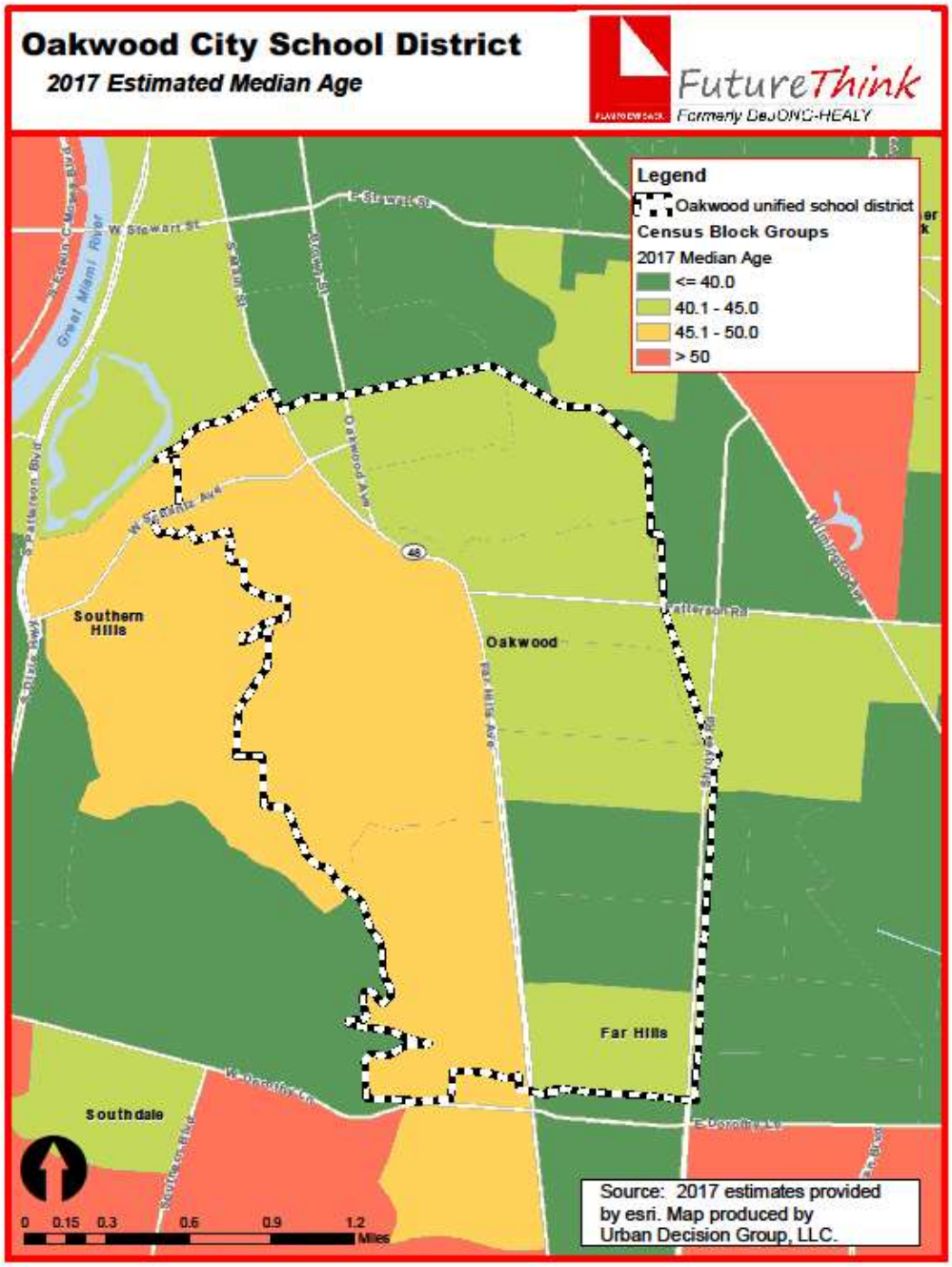
Oakwood City School District	2017 Estimates	2022 Projections	Change 2017-22	Change 2017-22 (%)
Median Household Income	$102,829	$107,086	$4,257	4.1%
Average Household Income	$139,553	$152,953	$13,400	9.6%
Average Family Size	3.17	3.18	0.01	0.3%
Total Family Households	2,371	2,330	-41	-1.7%

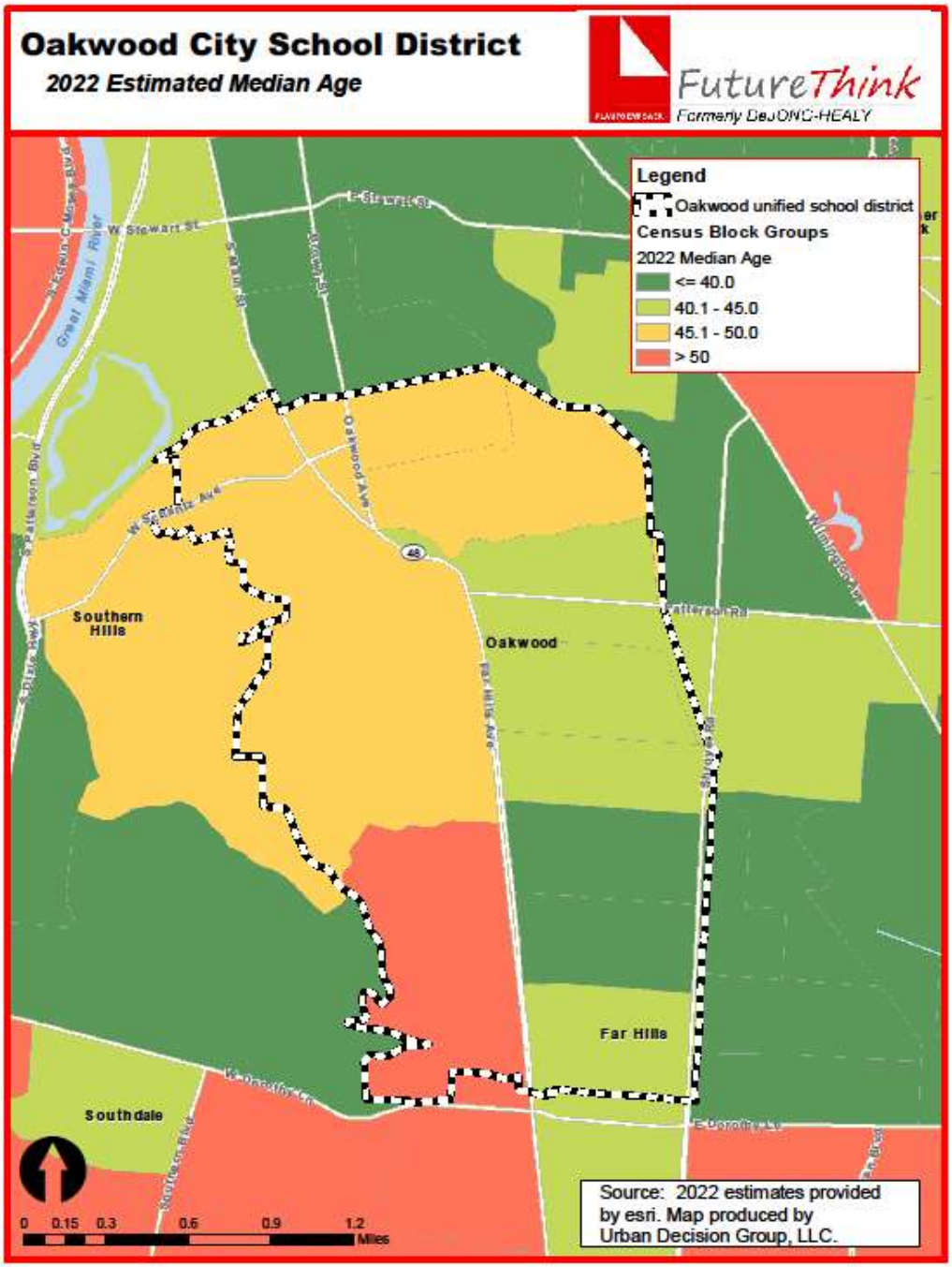
Source: ESRI

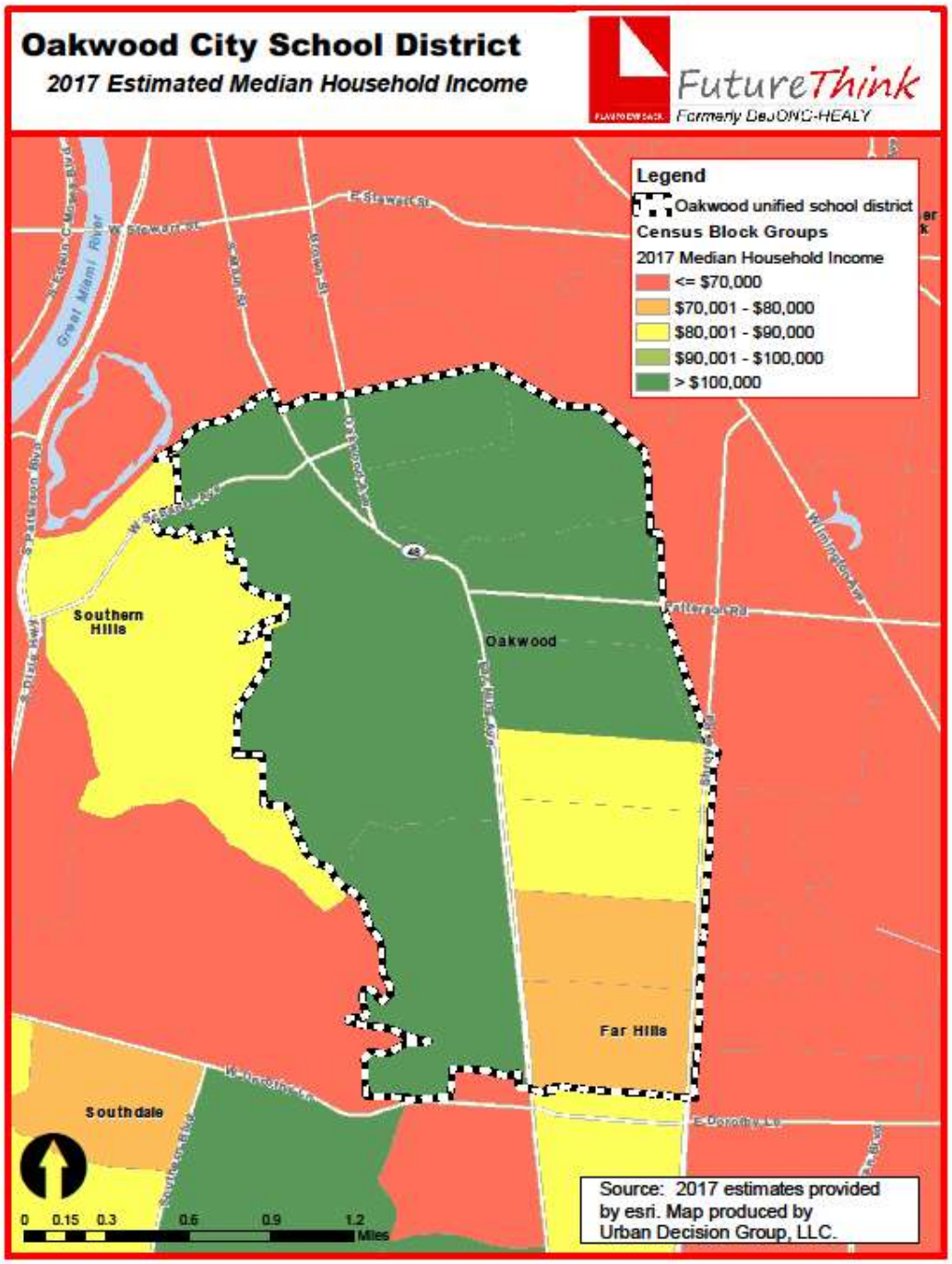
The maps on the following pages illustrate the data identified in the tables. The color coding identifies areas within the District that may be increasing or decreasing at different rates than others.

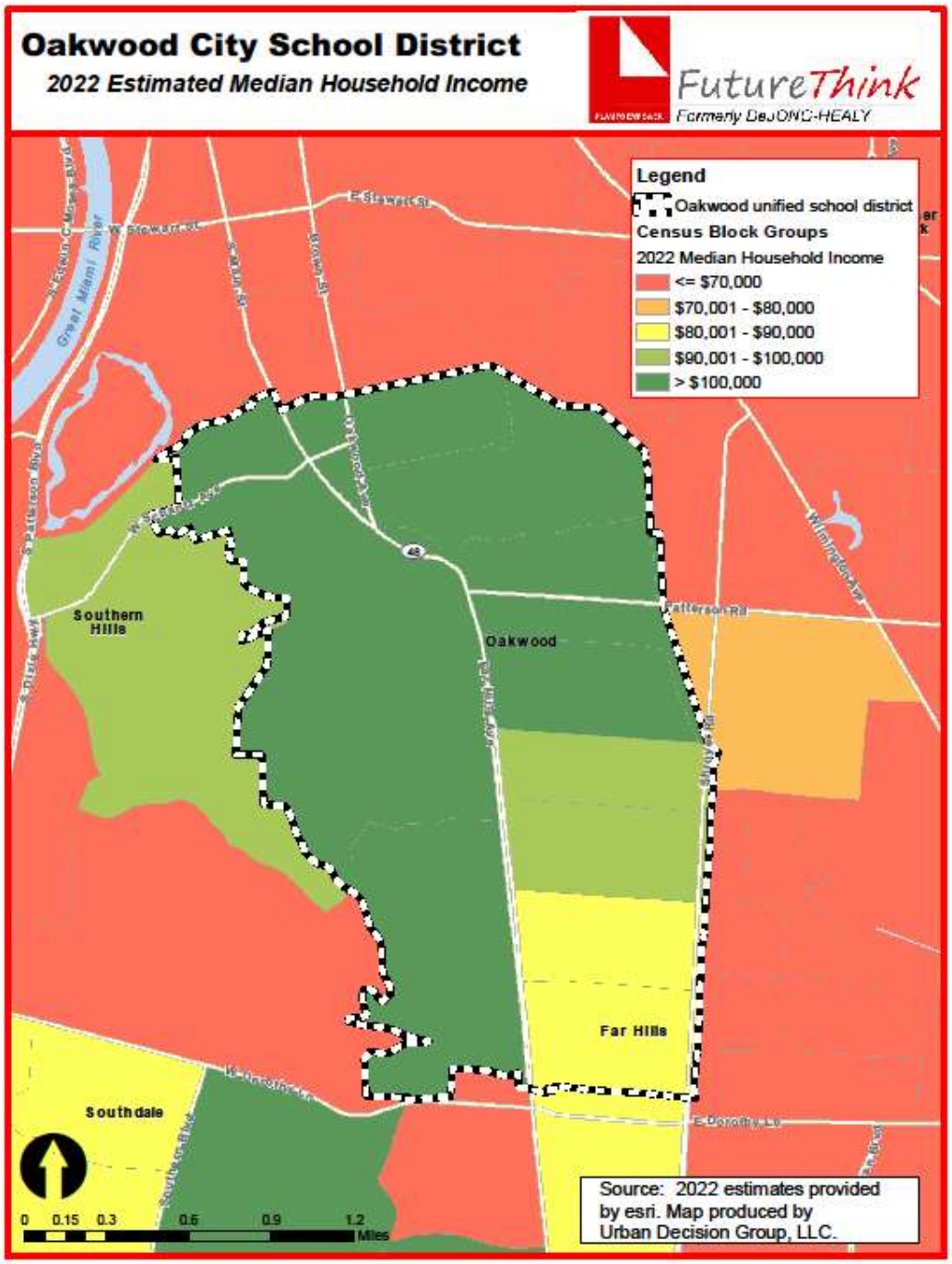

Oakwood City School District
2017 - 2022 Total Population Growth\Decline
FutureThink
Formerly DeJONG-HEALY
Legend
Oakwood unified school district
Census Block Groups
2017-2022 population growth
<= -2% (decline)
-1.9% to 0% (decline)
0.1% to 2%
2.1% to 4%
> 4%
Southern Hills
Southern Hills
Oakwood
Oakwood
Far Hills
Far Hills
Southdale
W Stewart St
E Stewart St
Great Miami River
Patterson Rd
W Dorothy Ln
E Dorothy Ln
0 0.15 0.3 0.6 0.9 1.2 Miles
Source: 2017-2022 estimates provided by esri. Map produced by Urban Decision Group, LLC.


Oakwood City School District
2017 - 2022 Ages 5-18
Population Growth\Decline
FutureThink
Formerly DeJONG-HEALY
Legend
Oakwood unified school district
Census Block Groups
2017-2022 Age 5-18 Growth
<= -10% (decline)
-9.9% to -5% (decline)
-4.9% to 0% (decline)
0.1% to 5%
> 5%
Southern Hills
Oakwood
Far Hills
Southdale
W Stewart St
E Stewart St
Great Miami River
Oakwood Ave
Patterson Rd
W Dorothy Ln
E Dorothy Ln
Southern Blvd
0 0.15 0.3 0.6 0.9 1.2 Miles
Source: 2017-2022 estimates provided by esri. Map produced by Urban Decision Group, LLC.


Oakwood City School District
2017 Estimated Median Age
FutureThink
Formerly DeJONG-HEALY
Legend
Oakwood unified school district
Census Block Groups
2017 Median Age
<= 40.0
40.1 - 45.0
45.1 - 50.0
> 50
Southern Hills
Oakwood
Far Hills
Southdale
Source: 2017 estimates provided by esri. Map produced by Urban Decision Group, LLC.
0 0.15 0.3 0.6 0.9 1.2
Miles


Oakwood City School District
2022 Estimated Median Age
FutureThink
Formerly DeJONG-HEALY
Legend
Oakwood unified school district
Census Block Groups
2022 Median Age
<= 40.0
40.1 - 45.0
45.1 - 50.0
> 50
Southern Hills
Oakwood
Far Hills
Southdale
Source: 2022 estimates provided by esri. Map produced by Urban Decision Group, LLC.
0 0.15 0.3 0.6 0.9 1.2 Miles


Oakwood City School District
2017 Estimated Median Household Income
FutureThink
Formerly DeJONG-HEALY
Legend
Oakwood unified school district
Census Block Groups
2017 Median Household Income
<= $70,000
$70,001 - $80,000
$80,001 - $90,000
$90,001 - $100,000
> $100,000
Southern Hills
Oakwood
Far Hills
Southdale
Great Miami River
Source: 2017 estimates provided by esri. Map produced by Urban Decision Group, LLC.
0 0.15 0.3 0.6 0.9 1.2
Miles


Oakwood City School District
2022 Estimated Median Household Income
FutureThink
Formerly DeJONG-HEALY
Legend
Oakwood unified school district
Census Block Groups
2022 Median Household Income
<= $70,000
$70,001 - $80,000
$80,001 - $90,000
$90,001 - $100,000
> $100,000
Southern Hills
Oakwood
Far Hills
Southdale
Great Miami River
Source: 2022 estimates provided by esri. Map produced by Urban Decision Group, LLC.
0 0.15 0.3 0.6 0.9 1.2
Miles

HOUSING INFORMATION

The chart below illustrates the number of single-family dwelling building permits issued each year in Montgomery County.

# of Building Permits Issued for Single Family Dwellings

Year	Montgomery County
2007	753
2008	348
2009	340
2010	241
2011	361
2012	530
2013	455
2014	355
2015	420
2016	409
2017*	175

Source: SOCDS Building Permits Database

* through June 2017

SURVIVAL RATIOS

The chart below demonstrates the changes in enrollment as students move through the system. Percentages greater than 100 indicate that there are more students than there were in the previous grade the previous year. In other words, there was growth and new students entered the system. Percentages less than 100 indicate that there was decline with students leaving the system.

- Birth to Kindergarten: This ratio indicates the number of children born in the area who attend kindergarten in the District 5 years later. Percentages less than 100% result from movement out of the district, attendance at a non-public or charter school, or residence in another district within the same area.

The following table illustrates the survival ratios for the Oakwood City School District.

from	to	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
2007	2008	71.0%	113.7%	103.8%	104.0%	103.2%	107.2%	103.4%	98.8%	105.9%	97.7%	101.1%	98.1%	103.0%
2008	2009	59.3%	100.7%	103.2%	98.8%	101.7%	103.1%	97.8%	101.1%	99.4%	97.8%	100.6%	98.3%	98.7%
2009	2010	57.5%	120.7%	105.1%	101.2%	106.1%	101.6%	95.2%	104.0%	99.5%	101.8%	100.0%	96.4%	103.4%
2010	2011	66.9%	109.2%	102.7%	99.3%	102.4%	102.9%	98.9%	98.7%	97.8%	95.1%	97.6%	92.6%	101.9%
2011	2012	59.6%	112.0%	106.9%	101.3%	104.9%	94.1%	104.5%	98.4%	103.8%	101.1%	101.1%	100.0%	100.0%
2012	2013	65.2%	108.3%	98.5%	102.9%	94.7%	101.3%	103.1%	100.5%	103.8%	101.2%	98.9%	94.9%	101.8%
2013	2014	65.0%	105.4%	102.3%	107.8%	102.1%	104.2%	104.6%	109.8%	101.1%	104.8%	102.4%	101.7%	103.0%
2014	2015	64.6%	100.8%	102.2%	105.2%	105.8%	104.1%	105.3%	100.6%	102.8%	96.8%	96.5%	101.8%	97.8%
2015	2016	75.4%	109.6%	97.5%	102.2%	100.0%	101.4%	105.9%	101.9%	103.1%	101.1%	104.4%	101.0%	98.3%
	average	64.94%	108.930%	102.46%	102.5%	102.32%	102.2%	102.1%	101.5%	101.9%	99.712%	100.293%	98.323%	100.862%
	standard deviation	5.427%	5.918%	2.782%	2.677%	3.282%	3.355%	3.589%	3.350%	2.478%	2.854%	2.274%	3.002%	2.077%

ENROLLMENT PROJECTION

Enrollment projections were developed after analyzing the data collected in this report. The projections indicate a decrease of 102 students from the 2016-17 to the 2026-27 school year. The following tables and graph illustrate projected enrollments by grade and by grade group through the 2026-27 school year.

Oakwood City School District
Projected Enrollment

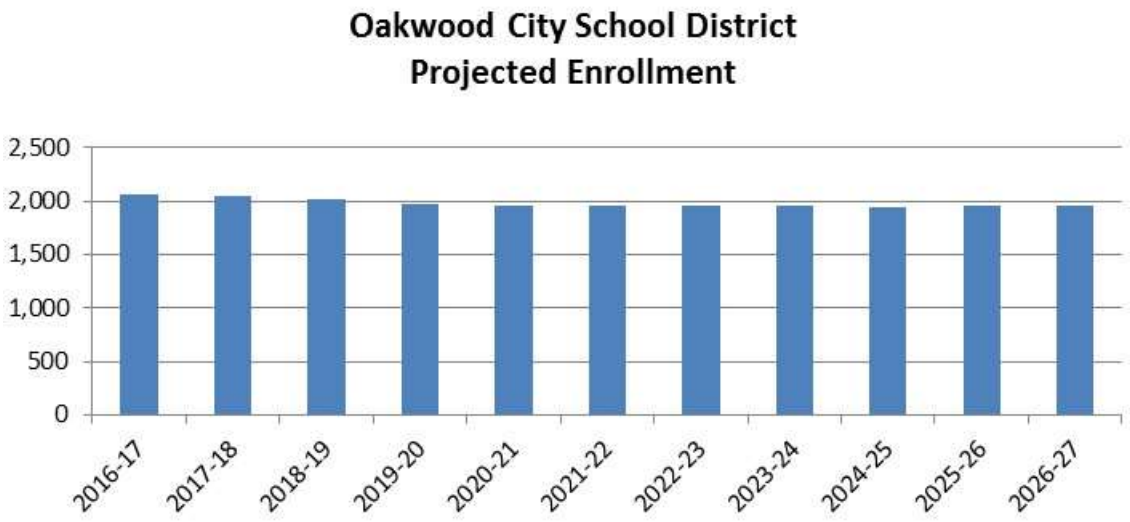
Grade	2016-17 Actual	2017-18	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
K	**147**	111	121	111	133	122	122	122	122	122	122
1	**126**	159	120	130	120	144	132	132	132	132	132
2	**117**	130	164	123	134	123	147	135	135	135	135
3	**142**	122	134	169	127	138	127	153	140	140	140
4	**141**	146	124	137	173	130	142	130	156	143	143
5	**149**	145	150	128	141	178	134	145	134	160	147
6	**161**	156	152	156	133	147	186	140	152	140	167
7	**161**	164	159	154	159	136	150	189	142	154	142
8	**166**	165	168	162	158	163	139	153	193	145	158
9	**187**	169	167	170	164	160	165	140	155	196	147
10	**191**	189	170	169	171	166	161	166	141	156	197
11	**193**	190	187	170	169	175	172	167	171	150	164
12	**169**	195	194	191	173	176	179	174	169	174	154
K - 12 Total	**2,050**	2,041	2,010	1,970	1,955	1,958	1,956	1,946	1,942	1,947	1,948
Ungraded	**3**	3	3	3	3	3	3	3	3	3	3
Grand Total	**2,053**	2,044	2,013	1,973	1,958	1,961	1,959	1,949	1,945	1,950	1,951

Source: FutureThink

Oakwood City School District
Projected Enrollment by Grade Group

Grade	2016-17 Actual	2017-18	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27	2027-28
K - 5	**822**	813	813	798	828	835	804	817	819	832	819
6 - 8	**488**	485	479	472	450	446	475	482	487	439	467
9 - 12	**740**	743	718	700	677	677	677	647	636	676	662
K - 12 Total	**2,050**	2,041	2,010	1,970	1,955	1,958	1,956	1,946	1,942	1,947	1,948
Ungraded	**3**	3	3	3	3	3	3	3	3	3	3
Grand Total	**2,053**	2,044	2,013	1,973	1,958	1,961	1,959	1,949	1,945	1,950	1,951

Source: FutureThink


Oakwood City School District
Projected Enrollment
2,500
2,000
1,500
1,000
500
0
2016-17
2017-18
2018-19
2019-20
2020-21
2021-22
2022-23
2023-24
2024-25
2025-26
2026-27

CONCLUSION

As with any projection, the District should pay close attention to live birth counts, enrollment in elementary schools, community school enrollment, open enrollment, and any housing growth. Each of these factors will have an impact on future student enrollment.

FutureThink is pleased to have had the opportunity to provide the District with enrollment projection services. We hope this document will provide the necessary information to make informed decisions about the future of the Oakwood City School District.